NATURAL HISTORY OF CAGE BIRDS.

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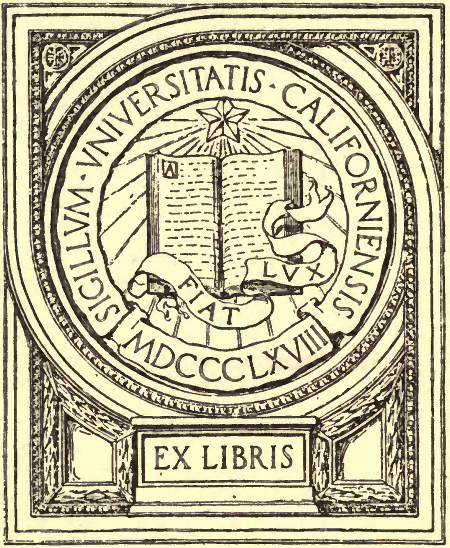
J. M. BECHSTEIN, M. D.



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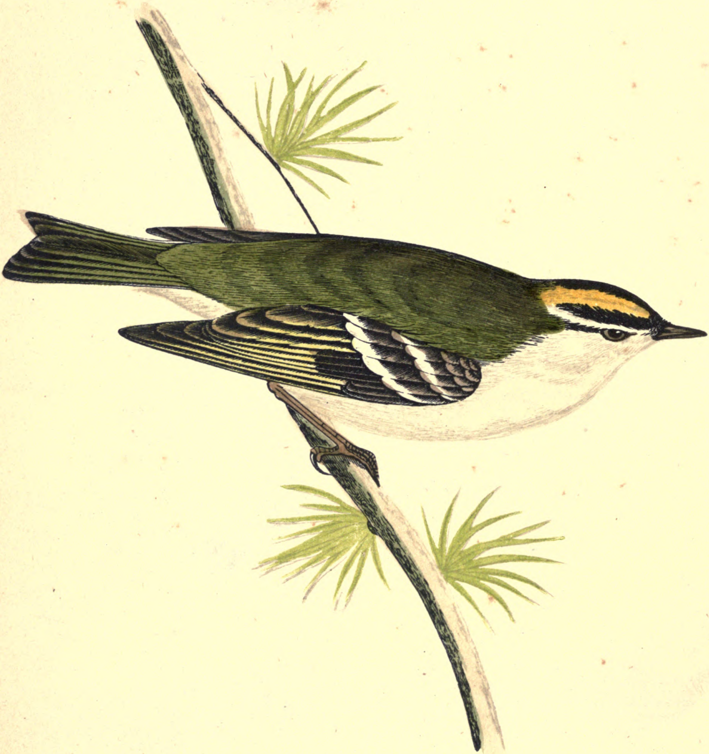

GOLD-CRESTED WREN.

THE

NATURAL HISTORY

OF

CAGE BIRDS

THEIR

MANAGEMENT, HABITS, FOOD, DISEASES,
TREATMENT, BREEDING, AND THE METHODS
OF CATCHING THEM.

BY

J. M. BECHSTEIN, M.D.

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AUTHOR'S PREFACE.

THE Natural History of CAGE BIRDS, which I now lay before the public, is a work I have long been solicited to write. There are many people who like to keep birds, who neither know their habits nor the proper treatment or food requisite for them. Even those who are not altogether ignorant of these, often have but very limited, superficial, and, what is worse, sometimes erroneous ideas on the subject. It is for such readers I have given the following Introduction; for professed naturalists will find nothing there but what they have already learnt, either from my own works or from those of other authors on natural history.

If long experience and minute observation on the subject of his work is calculated to gain an author credit, I flatter myself that this will not be denied me, since from my earliest youth I have delighted in being surrounded with birds, and am so accustomed to them that I cannot write at my desk with pleasure, or even with attention, unless animated by the warbling of the pleasing little creatures which enliven my room. My passion is carried so far, that I always have about thirty birds around me, and this has naturally led me to consider the

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best and easiest mode of procuring them, as well as of feeding and preserving them in health. Few amateurs, therefore, are better fitted than myself to write on this subject; and I hope I have done it to the satisfaction of the public. I ought also to notice in this place the plan of my work, as my book may fall into the hands both of those who might feel a wish to learn more particulars, and of those who may think much less would have sufficed.

I have described all the indigenous European birds with which I am acquainted that are capable of being tamed, and are pleasing in the house. As to foreign ones, I have only spoken of those I have occasionally seen in Germany, and which can be procured without much difficulty.

I have followed the same plan in their natural history which I have pursued in my other works on birds.

DESCRIPTION.—Under this head I have entered into particular details, in order that the amateur may the better satisfy himself in discriminating the species and the sex of the bird before him. This knowledge is exceedingly necessary, as the bird-dealers are not very scrupulous in deceiving their customers, either by selling one species for another, or a female for a male. These descriptions may likewise have the advantage of inspiring a taste for ornithology in the bosom of a mere amateur, who may, by repeated observations, afterwards enrich this branch of natural history with his own remarks.

HABITATION.—On forming a wish to possess any particular bird, it is natural to try to discover what situations it frequents in order to find it, and when it has been found and secured, a desire to know the best place to keep it in follows as a matter of course.

FOOD.—In keeping tame birds it is most important to know what food is best adapted to each species; that is to say, what approaches nearest to its natural aliment. I have therefore divided the directions on this point into two parts; showing in the first the natural food of the bird in its wild state, and in the second what is best for it in confinement.

BREEDING.—Many birds succeed best when reared from the nest, which makes it necessary to speak of their manner of being hatched, and the like.

DISEASES.—Birds being very tender creatures, on passing from a state of liberty to slavery, in which they lose the means of exercise and proper food, are soon afflicted with many diseases occasioned by this change alone, without reckoning others that naturally follow in their train. Under this head I endeavour to point out these, and their proper treatment; but I confess that this is the most imperfect part of my work, and I wish some clever experienced medical man would take the trouble to render it more correct.

CHASE.—On going into the country a wish often arises to procure a bird, and therefore under this head I have described the method of catching such species as may be desired.

Attractive Qualities.—Under this head I have stated the properties which render a bird worthy of our notice, and of being tamed and kept in the house.

The volume ends with an alphabetical index, which will enable a person instantly to find the birds whose history he requires. May my work be as useful as it is my wish to make it, and my intentions will be accomplished.

SECOND EDITION.

The call for a second edition is no inconsiderable proof to me that I accomplished my purpose in the first. None of my works have had a more flattering reception, from all classes of readers; but particularly from some of the most distinguished, who have given me repeated proofs of their satisfaction. I have also had the pleasure of assisting many amateurs with my experience, who have honoured me with questions. This pleasure is now increased by being able to render these instructions general, and to perfect this new edition by later observations, some communicated by others, which I judged it right to introduce. If any reader is surprised at not finding in this work many foreign birds seen in France, Holland, or in some of the maritime towns of Germany, it is because I have never had an opportunity of observing them myself: in a word, it is very pleasing to me to feel that my work has increased the number of the lovers of natural history; and I hope to see them still increasing. It is, indeed. my earnest wish that it may contribute more and more to the love of that class of attractive creatures with which the Creator has adorned the earth, and which sing His praises so melodiously and unceasingly!

THIRD EDITION.

A NEW edition of my Natural History of Cage Birds having been called for, I have made many additions and improvements in the work, as will appear on comparison. Some have alleged that I have been too diffuse in my descriptions, and others find fault that I have introduced birds difficult to tame, such as the gold-crested wren and the common wren. In the latter case, at least, the most ample details are excusable, as the birds require more care: yet I know several amateurs who always have one or two wrens flying about a room, or in a cage, and to let loose so delicate a little bird as the gold-crested wren always gives great pleasure. Besides, the minutest detail can never, in such cases, do any harm. I have likewise added some foreign birds, several of which have been but recently introduced in this country by bird dealers.

DREISSACKER.
November, 1812.

NOTICE BY THE TRANSLATOR.

THE work of Dr. BECHSTEIN upon CAGE BIRDS has been so highly esteemed on the Continent that it has passed through several editions, both in the original and in translations. Besides rendering as faithfully as care could effect, the interesting details of the author, numerous notes have been added, as well as several species introduced, which have recently been kept with success in this country by the Hon. and Rev. Mr. Herbert, Mr. Sweet, Mr. Blyth, and others. The mode of management also peculiar to these, and so different in some points from that recommended by Dr. Bechstein, has been given in detail. It is to be hoped that this translation may have similar success, and produce similar effects in increasing the taste for Natural History, which the original has had on the Continent. It is proper to add, that the drawings of cages, which illustrate this edition, were selected by permission of Mr. Cato, Holborn Bridge, from the numerous elegant specimens which his stock contains.

LONDON,
November 1837.

INTRODUCTION.

BY CAGE BIRDS, I mean those kept by amateurs, for amusement, in their apartments, generally selected for sweetness of song or beauty of plumage; but the naturalist has other reasons for surrounding himself with these pleasing creatures: they enliven him, and he delights in studying their habits and characters. To attain these objects it is necessary, in the first place, to be able to distinguish readily between the males and females, since the former are generally superior in their powers of song, and therefore preferable. I have, for this reason, made a point, in the following sketch of the history of house birds, of showing the colours and other marks which characterise the two sexes; and, as all birds cannot be tamed, whilst many others offer no inducement to make the attempt, it follows that those about to be spoken of must necessarily be but a small proportion of all the known species of birds.

SONGS OF TAME BIRDS.

WHAT is most prized and admired in house birds is undoubtedly their song. This may be natural or artificial, the former being as varied as the species of the birds, for I know of no two indigenous species quite similar in their song; I ought, perhaps, to except the three species of shrike I have given, which, from their surprising memory, can imitate the songs of other birds so as to be mistaken for them: but a naturalist would soon perceive a slight mixture of the song natural to the imitator, and thus easily distinguish between the shrike that copied, and the tit-lark or red-breast copied from*. It is so much the more important to be well versed in the different birds' songs, as to this knowledge alone we are indebted for several curious observations on these creatures

An artificial song is one borrowed from a bird that the young ones have heard singing in the room, a person's whistling, a flageolet, or a bird-organ. Nearly all birds, when young, will learn some strains of airs whistled or played to them regularly every day; but it is only those whose memory is capable of retaining these that will abandon their natural song, and adopt fluently, and repeat without hesitation, the air that has been taught them. Thus, a young goldfinch learns, it is true, some part of the melody played to a bullfinch, but it will never be able to render it as perfectly as this bird; a difference not caused by the greater or less suppleness of the organ, but rather by the superiority of memory in the one species over that of the other.

We distinguish in birds a chirping and warbling, or song, properly so called; besides this, several species, with a large, fleshy, undivided tongue, are able to repeat articulate sounds, and they are then said to *talk*, such as parrots and jays.

It is remarkable, that birds which do not sing all the year, such as the redbreast, siskin, and goldfinch, seem obliged, after moulting, to learn to warble, as though they had forgotten; but I have seen enough to convince me that these attempts are merely to render the larynx pliant, and are a kind of chirping, the notes of which have but little relation to the proper song; for a slight attention will discover that the larynx becomes gradually capable of giving the common warble.

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* See reasons for doubting this conclusion in Professor Rennie's DOMESTIC HABITS OF BIRDS, Chap. xvii.—TRANSLATOR

This method of recovering the song does not then show deficiency of memory, but rigidity occasioned by the disuse of the larynx. The chaffinch will exercise itself in this way some weeks before it attains its former proficiency, and the nightingale practises as long the strains of his beautiful song, before he gives it full, clear, and in all its extent *.

The strength and compass of a bird's voice depend on the size and proportionate force of the larynx. In the female it is weak and small, and this accounts for her want of song. None of our woodland songsters produces more striking, vigorous, and prolonged sounds than the nightingale; and none is known with so ample and strong a larynx: but as we are able to improve the organisation of the body by exercise and habit, so may we strengthen and extend the larynx of several birds of the same species, so as to amplify the song in consequence, by more nutritive food, proper care, sounds that excite emulation, and the like; chaffinches, bullfinches, canaries, and other birds reared in the house, furnish daily examples of this.

I should not omit mentioning here an observation of Mr. Daines Barington †, which tends to prove the possibility of improving the song of wild birds, by rearing linnets, sparrows, and others, near some good warbler, such as a nightingale or canary, and then setting them at liberty; but, though there is some truth in this assertion, yet it is subject to certain restrictions. I only know of two ways of carrying this idea into execution; one by suspending the cages of the best warblers in the orchard where the birds which they are to teach breed; the other, to enclose these warblers in a large aviary of iron wire, in the open air. There let them teach their young ones, which may be set at liberty as soon as they are able to fly: but birds taken very young from the nest, and reared, formed, and educated in the house, would not have instinct to find

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* This previous recording, as it is termed, is not uniform. Mr. Blyth informs us that he had, in the year 1833, a blackcap which struck up all at once into a loud song.—TRANSLATOR.

† Phil. Trans. vol. lxiii. 1773.

their food when set at liberty, and must perish of hunger, or at least die in the winter.

The same remarks are applicable to a work published by M. Gambory at Copenhagen, in the year 1800.

I think, indeed, it is better to be contented with possessing in our houses artificial songs than to take so much trouble to alter and spoil the very delightful music of nature *.

HABITATIONS OF TAME BIRDS.

The space assigned to tame birds varies according to their nature and destination. All are less at ease in a cage than when at liberty in a room, where young pine branches, cut in winter or early in spring, should be placed for their accommodation †. Several, however, never sing unless confined within narrow limits, being obliged, as it would appear, to solace themselves, for the want of liberty, with their song; consequently, birds only prized for the beauty of their plumage or their pleasing actions, are best placed in a room. Rather large birds, such as thrushes, should have a room appropriated to them, or be kept in a large aviary, as they give a very unpleasant smell to the place which they occupy, unless carefully cleaned; but their young ones may be allowed the range of any apartment, placing in a corner a cage or branch to rest and sleep on, where they may run and hop freely, seeking a roosting-place for themselves in the evening, on the fir branches placed for that purpose; or in a cage with several divisions, into which they soon learn to retire. Some birds, such as the

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* Besides, we cannot say that there is a want of variety in this music. I may again quote Mr. Barington (Phil. Trans.): "The death of the male parent, just at the time his instructions were required, will occasion some variety in the song of the young ones, who will thus have their attention directed to other birds, which they will imitate or modify according to the conformation of their larynx; and they will thus create new variations, which will afterwards be imitated by their young ones, and become hereditary, until a circumstance of a similar nature may introduce greater variations. If care was taken there need not be two birds that sung exactly alike: however, these varieties are confined within certain limits."—Translator.

† If pine and fir branches cannot be obtained, oak, elm, or beech will do, cut in winter; though not green, yet there will be leaves.—Translator.

dunnock and the blue-breast, sing best in this state of liberty. It is necessary to avoid placing them with shrikes or tits, as these often, in the midst of plenty of food, will kill smaller birds, for the sake of eating the brain or intestines. Those that are confined that we may better enjoy the beauty of their song, should have a cage proportioned to their natural vivacity: a lark, for example, requires a larger cage than a chaffinch. The habits of the birds must also be considered, whether they rest on the ground or perch on sticks. Thus, the nightingale must have perches, while the sky-lark never makes use of these.

In the account of each bird I shall point out what shaped cage I have found most suitable.

In every case cleanliness is absolutely necessary, in order to keep birds a long time, as well as healthy and active. In general it is better not to disturb the birds very often; but if not every day, yet every week at furthest, it is necessary to clean even the perches of those that roost, and strew sand where they keep at the bottom. Negligence in this entails many inconveniences,—unpleasant smells from sick birds, gouty feet to some birds, loss of the use of their limbs or all their claws; such sad experience may at length cure the negligent amateur. "We love birds," they say; "No," I reply, "you love yourselves, not them, if you neglect to keep them clean."

In washing the feet of birds they must first be soaked in warm water, or the dirt will be so pasted on the skin that in removing it the bird will be wounded, and the irritation thus excited may soon occasion dangerous ulcers. House birds are generally subject to sore feet, and great attention is therefore necessary to examine them often if they are not attacked; a hair wound round them will sometimes become drawn so tight that in time the part will shrivel up and drop off. Another proof of the necessity of care in cleaning is, that few birds preserve their claws after having been kept some years in the house. It must be confessed, however, that among birds of the same species there is a very marked difference in this respect, some being always extremely clean, whilst others are for ever dirty, and seldom clean themselves. There are also some species in which cleanliness seems an innate quality; among these are yellow hammers reed buntings, and linnets;

the latter especially have always appeared to me patterns of neatness, and though I have had many, I do not recollect being obliged to clean the feet of any, whilst larks and fauvettes have them always dirty, and let them fester with ulcers rather then take the trouble to clean them*.

Many amateurs amuse themselves with taming their birds so completely that they can let them fly out of a window and recall them at pleasure. A friend of mine, who tamed not only birds, but also adders, otters, weasels, foxes, and the like, knew how to render them so familiar that at the least sign they would follow him anywhere. This method was as easy as it was sure, and I can judge of it from having been an eye-witness to the effect; it is as follows:

When he wishes to accustom a bird to fly out and return, or go out of doors perched on his hand or shoulder, he begins by opening the cage and teazing the bird with a feather. The bird soon pecks at it, then at the finger, and at last ventures outside the cage to fly on the finger presented to it. My friend then caresses it, and gives it something nice to eat, so that it soon becomes accustomed to feed on the hand. When this is attained, he begins to teach it to come at a certain call, and as soon as it will allow itself to be taken, he carries it on his hand or shoulder from room to room, the doors and windows being at first well closed; he also lets it fly about a little, making it return when called. At last, when the bird comes at his call, without hesitation or fear of men or animals, he tries it with precaution out of doors. It thus by degrees becomes so accustomed to him that he can take it into the garden, even in the midst of a large company, without any fear of its flying away.

Great precaution is necessary in spring, and during the pairing season, when taking out old birds that have been thus trained; for, upon hearing the call of their own species, they soon fly off to resume their wild state. Young linnets, bullfinches, and canaries, are the species with which this method succeeds best.

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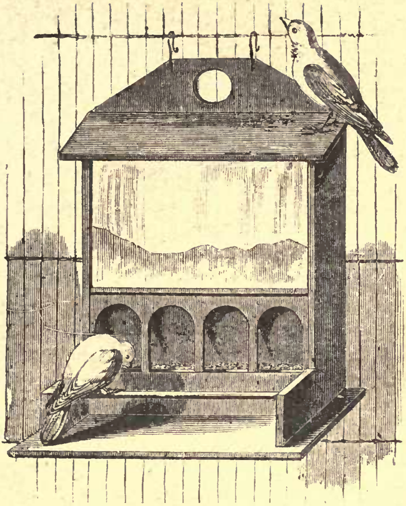
* This perhaps depends on the peculiar forms of the bills more than on inclination, for the fauvette and blackcap often attempt to clean their feet without success. —TRANSLATOR.



Feeding-box for small birds.

FOOD OF TAME BIRDS.

It is very necessary to procure for house birds food which is like, or at least which nearly resembles, what they would procure for themselves in their wild state. This is rather difficult, and sometimes almost impossible, for where can we find in our climate the seeds on which the Indian birds feed in their own country? Our only resource then is to endeavour, with judgment, to accustom these birds to that food which necessity obliges us to give them. There are some birds, such as chaffinches, bullfinches, thrushes, and the Bohemian chatterer, which are so manageable in this respect, that as soon as they are brought into the house they eat without hesitation anything that is given to them; but others, which are more delicate, will absolutely eat nothing, either through disgust of their new food, or despair at the loss of their liberty; with these great precaution is necessary. Dr. Meyer, of Offenbach, writes to me on this subject as follows: "The following is the best method of accustoming newly-taken birds to their change of food, a thing which is often very difficult to accomplish with some species. After having put the bird in the cage it must be left quiet for some hours, without disturbing it at all; it must then be taken and plunged into fresh water, and immediately replaced in the cage. At first it will appear faint and exhausted, but it will soon recover, arrange its feathers, become quite lively, and will be sure to eat whatever is given to it. It is a well known fact that bathing gives an appetite to birds, for the same reason that it does to men."

If, as an exception, one of these delicate birds, among which are most of the songsters, eats with eagerness as soon as it is brought into the house, it is a sign of death, for it seems like an indifference which is not natural, and which is always the consequence of disease. Those birds which retire into a corner, moping for some hours, are the most likely to live; it is only requisite to leave them alone, and by degrees they recover from their sullenness.

In order to give some general rules for the best food for house birds, I have divided them into four classes:—

The first comprehends those birds which live only on seeds, such as canaries, goldfinches, and siskins.

The second are those which feed on both seeds and insects, such as quails, larks, chaffinches, and bullfinches; some of these also eat berries and the buds of trees.

The third are those which seek only berries and insects, such as nightingales, redbreasts, thrushes, and fauvettes.

The fourth are those which eat insects only, such as wagtails, wheatears, stonechats, and blue-breasts.

The species in this last class are the most difficult to preserve; but most of them, having nothing particular in their song, offer no compensation for the trouble and care which they require; but the following is the best method for success. After having collected the flies, which in spring may often be seen in great numbers on the windows of old buildings, they must be dried, and preserved in a jar. When live insects can no longer be found, these flies must be mixed with the paste, hereafter described, which may be regarded as a general or universal food, and given to the most delicate birds, such as nightingales, provided ants' eggs or meal worms are now and then mixed with it.

RECIPE FOR THE GENERAL FOOD.—In proportion to the number of birds, white bread enough must be baked to last for three months. When it is well baked, and stale, it must be put again into the oven, and left there until cold. It is then fit to be pounded in a mortar, and will keep several months without becoming bad. Every day a tea-spoonful for each bird is taken of this meal, on which is poured three times as much cold, or lukewarm, but not boiling, milk. If the meal be good, a firm paste will be formed, which must be chopped very small on a board. This paste, which is very nourishing, may be kept a long time without becoming sour or sticky; on the contrary, it is always dry and brittle. As soon as a delicate bird is brought in, some flies or chopped worms should be mixed with the paste, which will attract it to eat. It will soon be accustomed to this food, which will keep it in life and health.

Experience teaches me that a mixture of crushed canary, hemp, and rape-seed, is the favourite food of canaries; goldfinches and siskins prefer poppy-seed, and sometimes a little crushed hemp-seed; linnets and bullfinches like the rape-seed alone. It is better to *soak* it for the young chaffinches, bullfinches, and others; in order to do this, as much rape-seed as is wanted should be put into a jar, covered with water, and placed in a moderate heat, in winter near the fire, in summer in the sun. If this is done in the morning, after feeding the birds, the soaked seed will do for the next morning. All of them ought to have green food besides, as chickweed, cabbage leaves, lettuce, endive, and water-cresses. Sand should be put in the bottom of the cages, for it seems necessary for digestion *.

Amongst those of the second class, the quails like cheese and the crumbs of bread; the lark barley-meal, with cabbage, chopped cress, poppy-seed mixed with bread crumbs, and in winter, oats; the chaffinches, rape-seed, and sometimes in summer a little crushed hemp-seed. Too much hemp-seed, however, is hurtful to birds, and should only be given as a delicacy now and then, for when they eat too much of it they become asthmatic, blind, and generally die of consumption. Yellow-hammers like the same food as the larks, without the vegetables; the tits like hemp-seed, pine-seed, bacon, meat, suet, bread, walnuts, almonds, and filberts.

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* See Rennie's "FACULTIES OF BIRDS," Chap. V., for experiments on the subject.—TRANSLATOR.

The birds of the first class are easily preserved in the house, at least if not taken during the pairing season, for then the loss of their liberty affects them so much that they become sullen, and die of hunger.

Although the notice of a universal remedy is generally rather suspected, I cannot refrain from here recommending one or two sorts of paste which I have always used, and which agreed so well with all my birds, excepting those which I keep in cages on account of their beautiful songs, that it may justly be termed general or universal food: it is not only very simple and cheap, but also prevents great loss of time to those who possess a great many birds.

THE UNIVERSAL PASTE.—To make the first paste, take a white loaf which is well baked and stale, put it into fresh water, and leave it there until quite soaked through, then squeeze out the water and pour boiled milk over the loaf *, adding about two thirds of barley-meal with the bran well sifted out, or, what is still better, wheat-meal; but, as this is dearer, it may be done without.

For the second paste, grate a carrot very nicely (this root may be kept a whole year if buried in sand), then soak a small white loaf in fresh water, press the water out, and put it and the grated carrot into an earthen pan, add two handfuls of barley or wheat meal, and mix the whole well together with a pestle.

These pastes should be made fresh every morning, as they

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* The reason of this union of vegetable and animal food may be easily seen; the bread supplies the seed for the birds of the first class, and the milk the insects for those of the second, while the third and fourth here find their mixed food; and thus it ought to agree with all. Besides, the birds of the first class do not confine themselves exclusively to seeds; in their wild state they eat many insects, and some even feed their young entirely with them; this proves that animal food is sometimes useful and beneficial to them.—TRANSLATOR.

soon become sour, particularly the first, and consequently hurtful. For this purpose I have a feeding-trough, round which there is room enough for half my birds. It is better to have it made of earthenware, stone, or delft ware, rather than wood, as being more easily cleaned, and not so likely to cause the food to become sour.

The first paste agrees so well with all my birds, which are not more than thirty or forty, at liberty in the room, that they are always healthy, and preserve their feathers, so that they have no appearance of being prisoners. Those which live only on seeds, or only on insects, eat this food with equal avidity; and chaffinches, linnets, goldfinches, siskins, canaries, fauvettes, redbreasts, all species of larks, quails, yellow-hammers, buntings, blue-breasts, and red-starts may be seen eating out of the same dish.

Sometimes, as a delicacy, they may be given a little hemp, poppy, and rape-seed, crumbs of bread, and ants' eggs. One of these is necessary for the birds of the third and fourth class.

Every morning fresh water must be given to the birds, both for drinking and bathing. When a great many are left at liberty, one dish will do for them all, about eight inches long and two in depth and width, divided into several partitions, by which means they are prevented from plunging entirely into the water, and in consequence making the place always dirty and damp*. A vessel of the same size and shape will do for holding the universal paste, but then it must have no partitions. Quails and larks require sand, which does for them instead of water for bathing.

Some birds swallow directly whatever is thrown to them: great care must be taken to avoid giving them anything with pepper on it, or bad meat. This must be a general rule. I shall also remark, that food sufficient for one day only must be given to birds kept in cages, for they are accustomed to scatter it about, picking out the best, and leaving only the worst for the next morning; this makes them pine, and puts them out of humour.

MR. SWEET'S FOOD FOR SOFT-BILLED BIRDS (SYLVIADÆ).—The birds of this sort, though the finest songsters and most interesting of all the feathered tribe, have been less known or noticed than others, probably owing to the greater number only visiting us in summer, when the trees are so densely clothed with foliage that birds are not easily seen, and when heard sing are generally considered by those who hear them to be either blackbirds or thrushes, or some of the more common singing birds. When they are seen the greater number of them receive the general appellation of whitethroat, without distinction, though this is rather singular, since they are all very distinct when examined, and their songs are all very different. If you speak to a bird-fancier or bird-catcher about any of them, you might as well talk of a bird in the wilds of America, for they know nothing of them. Many of them are therefore difficult to be procured in the neighbourhood of London, though most of them are plentiful there.

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* If a rather large, flat, and not very deep vessel be used, in which the birds can bathe at their ease, it will make them more healthy and clean.—TRANSLATOR.

With care, the whole of them may be preserved in good health through the year, and many of them will sing through the greater part of the winter if properly managed. They require to be kept warm; the room in which they are should never be allowed to be below temperate, or they will suffer from it, particularly the tender sorts; at first the cold will make them lose their sight, after which they seldom recover. The redstart and nightingale are most subject to this; it sometimes also happens to the fauvette, and also to the whinchat.

When in a wild state, the birds of this sort feed principally on insects or fruit, and berries of various kinds. None of them are seed birds, so that they must be managed accordingly. The general food which I give them is hemp-seed, bruised up in boiling water, as small as it can be made; I then put to this about the same quantity, or rather more of bread, on which is also poured boiling water, and then the whole is bruised up together into a moist paste, particular care being required that there be very little or no salt in the bread; for should there be rather much it will kill the whole of the birds. The food should also be mixed up fresh every morning, as it soon spoils and turns sour, in which case the birds will not touch it, and sometimes it will make them go off their food altogether. When given to the birds, some fresh, raw, lean meat ought to be cut up small enough for them to swallow, and mixed with it. I generally put about the same quantity of meat as paste, and sometimes they will peck out the meat and leave the paste; at other times they will eat the paste and leave the meat; but in general they eat it all up together, particularly where several different species are kept together in the same large cage, a plan which I consider by far the best, as they amuse each other, and keep one another warm in cold weather. Besides the above food, an egg should be boiled very hard, the yolk taken out and crumbled or cut in small pieces for them; the white they will not eat. One egg I consider enough for twenty birds for one day, with their other food, it being only intended as a change of diet, which they will not continue well in health without.

The sorts, which feed on insects when wild, should have some of these preserved for them through the winter, except where they can be procured at all seasons. At a baker's shop, for instance, there are always plenty of meal-worms, crickets, and cock-roaches, of which most of these birds are very fond: when those are not to be procured, a good substitute is the large white grubs that produce the cockchafers, which in some years are very plentiful, and may be kept in pots of turfy earth through the winter, as may also the maggots of the blue-bottle fly, if procured late in the autumn; and they may be generally had as late as December. A quantity of these, kept in a pot of turfy earth in a cellar, or any other cool place, where they may not turn into flies too soon, is, I think, one of the best sorts of insects, and easiest kept and procured, for such birds through the winter. They will not touch them until they are well cleaned in the mould, but are then very fond of them, and a few every day keeps them in excellent health, and provokes them to sing.

Hon. and Rev. W. Herbert's food for soft-billed birds.—Milk, which Mr. Sweet recommends, I have found very fatal to many of the soft-billed birds, and I never give it; but the blackcaps do not seem to suffer from it. They are very fond of a boiled carrot mashed and moistened, or beet-root boiled and mashed. A boiled carrot will keep fresh many days in a basin of cold water, and is an excellent substitute for fruit in feeding them. Boiled cabbage, cauliflower, green peas are good for them; all sorts of puddings; a very little roast meat minced, I give them every day, and a little yolk of egg when it suits, but it is not necessary. The standard food is hemp-seed ground in a coffee-mill, and bread crumbs scalded and mashed up together, and fresh every day. They are very fond of ripe pears and elder-berries (but elder-berries stain the cage very much), currants, cherries, honeysuckle, and privet-berries.

Professor Rennie says, "I have more than once given the blackcap and other birds a little milk by way of medicine when they appeared drooping or sickly, and with manifest advantage*."

BREEDING OF TAME BIRDS.

House birds, being most of them reared like canaries, can only be made pair with great difficulty. When this object is accomplished, all of them require a large quiet place, a whole room if it can be had, in which branches of pine should be put, —a place, in fact, as much as possible resembling their natural abodes. But should you succeed in this respect, as you can never procure the materials which form the general base of their nests, it is better to give them artificial ones, made of the bark of the osier, straw, or even turnings of wood, in which it is only to put the soft stuff for lining, such as wool, the ravelings of silk, linen, or cotton, and the birds will take possession of it.

It is of consequence that the food for paired birds, and for the different ages of their young ones, should be chosen with judgment. I shall mention what must be done in this respect, in the articles relating to the different species of birds which I am going to describe in this work.

I must not omit two interesting observations which were communicated to me by a lady of my acquaintance. It sometimes happens, during a dry season, that the young birds are not hatched on the proper day, or are in danger of not being hatched at all; if, in this case they are plunged for one minute in water about their own warmth, and then re-placed under the bird, the effect will be as quick as it is successful †.

For the same reason, sometimes the young birds remain without their feathers beyond the proper time; a tepid bath removes with such success the dryness of their quills, that in twenty-four hours after replacing them damp in their nest they are in general covered with feathers. I shall end this paragraph with showing at what time it is best to remove young wild birds from their nest when intended to be reared. It is when the quills of the tail feathers are come out, and the other feathers are begun to grow, the eyes not being quite open. If removed earlier, their stomach will be too weak to support their new food; if taken later, it will be very difficult to make them open their beaks to receive a food which is unknown to them. There are some species, however, that are so easily reared, that any time will answer.

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* White's Selborne, 8vo. edit., 1833.

† See Rennie's "Habits of Birds," p 1 3.--Transl.

DISORDERS OF TAME BIRDS.

All tame animals are much more subject to disease than wild ones; and birds so much the more, as they are often shut up in very small cages, where they can take no exercise. It is often supposed that birds, in their natural free state, have no diseases; but people who will take the trouble to observe, will soon perceive the falsehood of this assertion. I have often found hedge-sparrows full of pimples, particularly in the naked parts, the feet, and round the beak. Their diseases are often increased by the delicacies of all kinds which are given them, such as biscuits and sugar, which injure the stomach, and cause a slow decay.

The principal diseases and their cures, according to my experience, are as follows; not, however, that different birds do not require, according to their food, different treatment.

I shall mention, under each bird, what must be done to cure those diseases which are peculiar to it, when general remedies fail.

THE PIP.

This is a catarrh, or cold, by which the nostrils are stopped up, and the membrane covering the tongue is hardened by inflammation. In large birds it is common to remove this skin. taking it off from the base to the tip: by this means this part can again perspire, the saliva necessary for digestion can flow, and the taste and appetite returns. A mixture of fresh butter, pepper, and garlic, generally cures this catarrh. It is a good thing, also, for the birds to drink the pectoral infusion of speedwell; and the nostrils may be opened by passing up a small feather. The ruffling of the head, the beak often open and yellow at its base, and the tongue dry, are the most decisive indications of this disease.

THE RHEUM.

The symptoms of this disease are frequent sneezing and shaking of the head. Some drops of pectoral elixir in the infusion of speedwell, which the sick birds must be made to take, appears to me to be the most efficacious remedy. I have given fowls even twenty drops of the elixir in a glass of the infusion.

When it is merely hoarseness, Dr. Handel, of Mayence, gave to his birds for several days, as their only drink, a very diluted decoction of dry figs, sweetened with a little sugar, and afterwards purged them for two days following, with the juice of carrots.

ASTHMA.

This is a very common disease among house birds. Those attacked with it have their breath short, often open their beaks as if to gasp for more air, and, when agitated or frightened, keep them open for a long time.

The cause of this disease may doubtless be found in the mode of life which these birds lead. Their food is generally too dry and heating, being principally hemp-seed, which is very injurious, but liked by all; and is the more hurtful, as it inclines them to eat too much. If to this be added the unchanged air of the rooms, particularly those which have stoves instead of chimneys, and the great heat which is kept up during winter, it is plain that there is much to injure the delicate lungs of these birds.

A moist and refreshing regimen and some aperients, more or less often, according to the violence of the disease, appears the most appropriate remedy. A favourite linnet and goldfinch, when attacked with very bad asthma, were relieved and preserved for several years by the following method.

The first thing was to leave off hempseed entirely, confining them solely to rape-seed; but giving them at the same time abundance of bread, soaked in pure water, and then pressed; lettuce, endive, or water-cresses, according to the seasons, twice a week, giving them boiled bread and milk, about the size of a nutmeg. This is made by throwing a piece of the crumb of white bread, about the size of a nut, into a teacupful of milk, boiling it, and stirring it all the time with a wooden spoon till it is of the consistency of pap. It must be quite cold before it is given to the birds, and must always be made fresh, for if sour it will prove injurious.

This paste, which they are very fond of, purges them sufficiently, and sensibly relieves them. In very violent attacks, nothing but this paste ought to be given for two or three days following, and this will soon give the desired relief.

When the disease is slight, or only begun, it is sufficient to give the bread and milk once in three or four days. When employed under similar circumstances, this treatment has cured several very valuable birds. It may not be useless here to renew the advice of always giving the birds an opportunity of bathing every day, by putting in their way a saucer, or any other small shallow bath, filled with water, which should never be too cold, and in winter always milk-warm.

One thing which is very injurious to the lungs of birds, and which too often occurs, is the fright occasioned by tormenting them, or by seizing them too suddenly; for the poor little things often rupture a blood-vessel in the breast while beating themselves about: a drop of blood in the beak is the sign, and a speedy death is the general consequence. If this do not happen, the breathing is not the less difficult and painful; and recovery is rare, at least without the greatest care and attention.

Birds which eat insects and worms, occasionally, by accident, swallow some extraneous substance, which, sticking in their throat, stops their respiration, and stifles them. The only remedy is to extract the foreign body, which requires much skill and dexterity.

When asthma is brought on by eating seeds which are too old, spoiled, or rancid, Dr. Handel recommends some drops of oxymel to be swallowed for eight days following. But the best way is to change the seed, and be sure there is none but good seed in the trough.

ATROPHY, OR WASTING.

This is caused by giving unnatural food to the bird, which destroys the digestive power of its stomach. In this case it disgorges, ruffles its feathers, and does not arrange them, and becomes thin very fast. The best thing is to make it swallow a common spider, which purges it, and put a rusty nail into its water, which strengthens the intestines, giving it at the same time its proper and natural food. Green food, such as lettuce, endive, chickweed, and particularly water-cresses, is the safest remedy. A very great appetite is a sign of this disease. A siskin, that was dying of atrophy, had nothing but water-cresses for three days following, and on the fourth he sung.

CONSUMPTION, OR DECLINE.

This disorder may be known by the extreme thinness of the breast, the swelling of the lower part of the belly, the total loss of appetite, and similar symptoms. As a cure, Dr. Handel recommends the juice of the white turnip to be given to drink instead of water.

COSTIVENESS.

This disease may be discovered from the frequent unsuccessful endeavours of the bird to relieve itself. Aperients will be of use. If a spider does not produce the desired effect, anoint the vent of the bird with the head of a pin steeped in linseed oil; this sort of clyster generally succeeds; but if the disease attacks a bird which eats meal-worms, one of these, bruised in sweet oil and saffron, is the most certain remedy, and the bird will swallow it without the least hesitation. Boiled bread and milk is generally of great use.

DIARRHŒA.

This is a disease to which birds that have been caught recently are very subject, before they are accustomed to their new food. Most of these die of it: they continually void a white calcareous matter, which sticks to the feathers round the vent, and being very acrid causes inflammation in that part and in the intestines. Sometimes chalybeate water and the oil clyster produce good effects; but it is better, if possible, to procure for the bird its most natural food. Some people pull out the feathers from the tail and vent, and then rub these parts with fresh butter, but this is a very painful and cruel operation. They also mix the yolk of an egg boiled very hard with their food, but I have never found this succeed very well. If there be any hope of curing this disease it is by attacking it at the beginning, before inflammation is violent; boiled bread and milk, a great deal of lettuce, or any other similar green refreshing food, in general completely cures them.

In a case of chronic diarrhœa, which almost reduces the birds to skeletons, Dr. Handel prescribes chalybeate water mixed with a little milk for their drink, which, he says, is an easy and certain cure.

THE BLOODY FLUX.

This is a disease with which some parrots are attacked. The best remedy is to make the birds drink a great deal of boiled milk, or even very fat broth; for their intestines, which are very much irritated, require something soothing to protect them from the acrid discharges, which, at the same time, must be corrected by healing food. Birds in this state generally do nothing but drink, therefore plenty of boiled milk should be given them, as it nourishes them, as well as acts medicinally, but should it appear to turn sour in the stomach it must, at least for some time, be discontinued.

OBSTRUCTION IN THE RUMP GLAND.

This gland, which is on the rump, and contains the oil necessary for anointing the feathers, sometimes becomes hard and inflamed, and an abscess forms there. In this case the bird often pierces it itself, or it may be softened by applying fresh butter without any salt; but it is better to use an ointment made of white lead, litharge, wax, and olive oil, which may be had at any good chemist's. The general method is to pierce or cut the hardened gland, in order to let out the matter, but if this operation removes the obstruction it also destroys the gland, and the bird will die in the next moulting, for want of oil to soften the feathers*.

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* This, though the common opinion, seems incorrect. See Rennie's "HABITS OF BIRDS," p. 4.—TRANSLATOR.

The gland is known to be obstructed when the feathers which surround it are ruffled, the bird never ceasing to peck them, and instead of being yellow it becomes brown. This disease is very rare among wild birds, for, being exposed to damp, and bathing often, they make more use of the liquor in the gland, consequently it does not accumulate sufficiently to become corrupted, sour, or cancerous. This confirms the necessity of giving them the means of bathing as often as instinct would induce them, as nothing can be more favourable to their health.

Dr. Handel, after piercing the gland, recommends a little magnesia to be mixed with the bird's drink.

EPILEPSY.

This is a disease with which house birds are very often attacked. What I have found to be most useful in this case is to plunge the sick birds every now and then into very cold water, letting them fall suddenly into it, and cutting their claws, or at least one or two, short enough for the blood to run.

From bleeding giving so much relief one would think that this disease is a kind of apoplexy, occasioned by want of exercise and too much food. Bullfinches and thrushes are more subject to it than any other birds, and bleeding always cures them. I have seen this done with great success in the following manner, but much delicacy and skill are required, as there would be great danger of laming the bird :—a very small hole is made on the surface of the claw, with a lancet or very sharp penknife; it is then plunged in lukewarm water, and if the operation be well done the blood runs like a thread of red silk; when removed from the water the bleeding stops: no bandage or dressing is required.

TYMPANY.

In this disorder the skin on one part of the body, or even the whole body, rises and swells to so great a degree that it is stretched like a drum. It is generally sufficient to pierce it with a pin, so as to let the air escape, and the bird will be cured. I had some larks attacked with this disease, which began again to sing a quarter of an hour after the operation.

DISEASE IN THE FEET.

House birds are often subject to bad feet. From the second year they become pale, and lose their freshness. They must be frequently cleaned, taking care to remove the skin; the thick loose scales ought also to be taken off, but with all possible precaution.

The gout occasions the feet to swell, they are also so scaly and painful that the poor little bird cannot support itself without resting on the points of its wings. Dr. Handel prescribes a warm fomentation with a decoction of soapwort. If a foot should be bruised or broken, he advises that the diseased bird should be shut up in a very small cage, the bottom of which is very smooth and even, without any perches, or anything which would tempt them to hop, and put in a very quiet and solitary place, out of the way of anything which might produce agitation. In this manner the bird will cure itself in a little time, without any bandage or plaster of any kind.

I am persuaded that the principal cause of bad feet is want of bathing. The scales, contracting from dryness, occasion great pain; in order to remove them with ease, and without danger, the feet must be softened in lukewarm water. I have seen the following method used with a bullfinch:—its cage was made with a moveable tin bottom, which being half or three quarters of an inch deep, could hold water, which was put in tepid, to bathe the bird; the perches were then removed, so that the bird was obliged to remain in the water, where it was left for half an hour, sometimes throwing it hemp-seed to amuse it. After repeating the bath once or twice the bird became very fond of it; and it was remarked that its feet became, if we may say so, quite young again. The scales being sufficiently softened, the middle of each was cut lengthways without reaching the flesh, this made the sides easily fall off. It is better to remove only two scales a-day, that the bird may not be wearied. By continuing the bath three times a week the feet become healthy and supple, and the bird is easy.

SORE EYES.

The juice of red-beet for drink, and also as a liniment, greatly relieves this disorder. Dr. Handel recommends washing the eyes, when disposed to blindness, with an infusion of the root of white hellebore.

TUMOURS AND ULCERS.

As to the tumours and ulcers which come on the heads of the birds, Dr. Handel touches them with a middling-sized red hot knitting-needle. This makes the watery humour run out, the wound afterwards dries and heals. To soften the pain a little liquid black soap is used. If, from the softness of the tumour, matter seems to have formed, it should be rubbed with fresh butter until it is come to a head; it may then be emptied, and opened by a few drops of essence of myrrh. During all this time the bird must have nothing but beet juice to drink.

Ulcers in the palate and throat may be cured by making the bird drink the milk of almonds for several days, at the same time lightly touching the ulcers several times a-day with a feather dipped in a mixture of honey and borax.

MOULTING,

Though natural, is generally accompanied with disease, during which the birds ought to be taken great care of. Their food should be changed, but without giving any heating delicacies, which are very injurious.

It has been observed that birds always moult at the time when their food is most abundant; the forest birds may then be seen approaching fields and cultivated places, where, having plenty of insects and seeds, they cannot suffer from want; indeed, the loss of their feathers prevents their taking long flights, and the reproduction of them occasions a loss of flesh which must be repaired. An abundance of food is therefore necessary, and, following this rule, during moulting some additional food must be given to house birds, appropriate to the different species—millet or canary seed, a little hemp-seed, white bread soaked in water, and lettuce, or endive, to those which feed on seeds; with a few more meal worms and ants' eggs to those that eat insects: all should have bread soaked in boiled milk, warmth, and baths. Nothing has succeeded better than this regimen: all the birds which I have seen treated in this manner have passed their moulting season in good health.

GIDDINESS.

This, without being properly a disease, is rather common, and is occasioned by the trick which the birds of the first class have, of turning their head and neck so far round that they fall head over heels. They may be easily cured of this trick by throwing a covering over the top of the cage, which prevents their seeing anything above them, for it is with looking up that this *giddiness* comes on.

PAIRING FEVER.

A disease which may be called the *pairing fever* must not be forgotten here. House birds are usually attacked with it in May, a time when the inclination to pair is greatest. They cease to sing, become sorrowful and thin, ruffle their feathers, and die. This fever generally first seizes those which are confined in cages: it appears to arise from their way of life, which is too uniform and wearying. I cured several by merely placing them in the window, where they are soon so much refreshed that they forget their grief, their desire for liberty or for pairing, and resume their liveliness and song.

I have observed that a single female in the room is sufficient to cause this disease to all the males of the same family, though of different species. Removing the female will cure them directly. The males and females at this season must be separated, so that they cannot see or hear one another This perhaps is the reason that a male, when put in the window, is soon cured.

AGE OF TAME BIRDS.

The length of a bird's life very much depends on the care which is taken of it. There are some parrots which have lived more than a century; and nightingales, chaffinches, and goldfinches have been known to live more than twenty-four years in a cage. The age of house birds is so much the more interesting, as it is only by observing it that we can know with any degree of certainty the length of birds' lives in general. Thus house birds are of importance to the naturalist, as giving him information which he could not otherwise acquire. It is worthy of remark, that the quick growth of birds does not prevent their living much longer than quadrupeds. The length of life with these is estimated to be six or seven times longer than the time which they take to grow: while birds live fifteen, twenty, and even thirty times longer.

This length of life is sometimes attributed to the substance of which the bones are composed being much more loose and light, and consequently remaining porous longer than those of quadrupeds. Some swans have lived three hundred years.

BIRD CATCHING.

We are furnished with house birds by the bird catchers and bird sellers; the latter procure foreign birds, and teach them, the former the indigenous ones. A good bird catcher ought to know not only the different modes of taking birds, but also all the calls for attracting the different species and sexes: the call notes vary very much among house birds, according to their passions and wants; thus the common chaffinch, when calling its companions, often repeats *iack, iack;* when expressing joy, *fink, fink*, which it also does when angry, though louder and more quickly; whilst its cry of sorrow is *treef, treef.*

The science of bird catching consists in studying these different languages well, and it will ensure success.

As each species of bird requires a different mode, I shall mention the various methods in the course of the work, and shall here only speak of bird catching in general. The first thing to know is the proper time to take birds. For birds of passage, impelled by cold and want of food to change their climate, nets should be spread in spring and autumn; erratic birds, which change their place merely in search of food, may be taken some in winter, some in spring, and others in autumn; 'those birds which never quit their native place may be taken at any season, but more easily in winter, when they assemble in small flocks.

Autumn is the time for taking birds in nets; some, attracted by a call-bird, or by food, come of their own accord into the trap; others, as the different species of larks, must be driven to the net: but spring is the best season for employing the decoy, or call-birds, concealed in cages, and also for catching the northern birds on their return from the southern countries to their own. It is the best time for observing the different sexes of these birds, for the males always arrive some days, or even a whole week, sooner than the females; hence it happens that at first the bird catchers take only the former, while the latter are caught afterwards. March and April are the best months for this sport, which should always be made in the morning from the break of day till nine o'clock, as afterwards the birds are too much engaged seeking their food to listen to the call of the decoy birds.

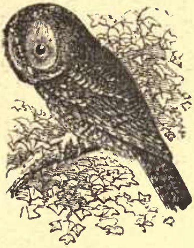
As most of the house birds of the first class, are caught in the net, I shall describe the simple manner in which it is done in Thuringia. Some rather strong branches of oak and beech are chosen with their leaves on; about the space of a foot is cleared of leaves, a foot and a half from the top of the branches, and in this space notches are made for fixing lime twigs: the bush, when thus prepared, must be placed on an eminence in the most frequented part of the birds' path, for birds of passage have fixed roads which they always follow, and in which numbers may be seen, whilst about four hundred paces distant not one can be met with. These tracks generally follow the mountains which border on valleys. It is on these mountains then that the decoy bush must be placed; it must then be garnished with lime twigs, placed in an inclined position, and beneath on the ground must be put the decoy birds, covering their cages with branches of fir or any other tree, so that the birds cannot see one another, as that would prevent the birds of passage from stopping, and the others from calling.

Decoy birds taken wild are preferred to those reared from the nest, for these never know the call note well, or at least do not repeat it often enough.

One of the best modes of catching is by what is called the *water-trap*; all kinds of birds may be caught by it, and there is always a choice. This sport is very agreeable in the hot summer days, for you have only to sit quietly under the thick shade of the foliage by the side of a running stream. A net of three, four, or six feet long, and three or four wide, according to the size of the place, must be spread over a trench made on purpose to receive the water. Some sticks of about an inch thick must be put into the trench level with the water.

to which hoops are fixed to prevent the net from getting wet by falling into the water; the rest of this little canal must be covered with branches. If the place be well chosen it will be surrounded during the day with numbers of different birds. This sport may be carried on from the 24th of July till October, from the rising to the setting of the sun.

When the *water-trap* can be set near a forest, in a grove of pines and firs, near quickset hedges and gardens, or in the middle of a meadow, wood or field-birds may be caught at the same time. For the sake of convenience, small cages are made which can be folded up and put into the pocket. They only serve, however, for the tamest kinds of birds, such as goldfinches, siskins, and linnets; those which are very wild and violent, as chaffinches and larks, should be put into a small bag made of linen, the bottom of which must be lined with felt. When brought to the house the violent species must be immediately put into a dark place, and their cages covered with branches or anything else, that they may not injure themselves, or spoil their plumage. A little attention to the birds' actions in such cases will point out what is best to be done, for amongst birds of the same species there is nothing regular in this respect.



BROWN OWL.

BIRDS OF PREY.

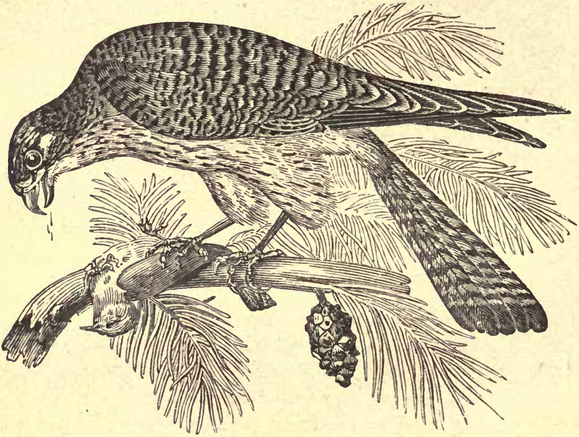
Birds of prey are so called from feeding only on animals: they have a hooked beak, strong feet, and very sharp claws.

Some birds of this group are used in falconry, so called because several species of falcon are employed in the sport: others, as the owls, are used to attract small birds to the barn-floor trap, and rooks to the decoy-hut. There seems little probability that bird-fanciers should wish to keep such birds as these in the house. Two species, however, appear to merit distinction, the kestril and the little owl

THE KESTRIL.

Falco Tinnunculus, Linnæus; La Cresserelle, Buffon; Der Thurmfalke, Bechstein.

Its size is that of a turtle-dove, its length fourteen inches, including the tail, which measures six, and two-thirds of which is covered by the folded wings. The wax, the irides, and feet are yellow. In general this is a handsome bird; but the male, as in all birds of prey, differs from the female, not less in the body being a third smaller than in the colours of his plumage. The top of the head is of a fine light grey, the back and the lesser wing coverts are of a red brick colour spotted with black; the belly is reddish, and streaked with black; the feathers of the tail dark brown spotted with white, ending in a broad black border.



The back and wings of the female are of a rust red crossed with many black lines; the head is of a light reddish brown streaked with black; the tail of the same colour, and terminated, like that of the male, with a broad black border; the extremity, however, of each is pale *.

Habitation.—In its wild state the kestril falcon may be found throughout Europe, preferring mountainous places, where there are walls of rocks or ruined castles. It is a bird of passage, which departs in October with the larks, and may then be seen hovering over them, or pouncing at mice; it returns in the following March.

In the house, if taken when old, it must be kept in a wire cage; but if caught and trained when young it may be left quite at liberty, provided its wings are kept clipped; in that case it will neither quit the house nor lodging assigned it, especially when become familiar with the dogs and cats.

Food.—In its wild state it preys on small birds and mice, pursues

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* There are varieties in this species: that with the head grey is rare, but when quite white is still more so.—Translator.

sparrows to the house-top, and even attacks birds in their cages; it is nevertheless contented with cockchafers, beetles, and grasshoppers.

In confinement it is fed on birds, mice, and a little raw meat; when given only the fresh offal of pigeons, or the lights and livers of sheep, it becomes so tame, that even if taken when old it never appears to regret the loss of its freedom.

Breeding.—The kestril falcon builds its nest in the fissures of rooks, high towers, old castles, or some aged tree. It lays from four to six eggs of a reddish yellow colour, spotted with red and brown. The young ones, which are at first covered with a simple white down, may be easily reared on fresh mutton.

Mode of Taking.—Lime twigs placed over the nest will easily secure the old ones when they come to feed their young; or a bird of prey's basket, with a lark or mouse put in it as a lure, may be placed where these birds are most frequently seen. This machine is raised on four stakes, and somewhat resembles a common safe, having a lower shelf as large as a moderate sized table, with four upright posts, to which are fastened the partitions of net or wire; on the top and sides are fixed two iron rods; on these, by means of rings, there runs a net which covers the whole.

Attractive Qualities.—Its fine plumage, its sonorous notes *kle, kle*, which it sometimes repeats in continued succession, and its amusing actions, must make it a favourite with most amateurs; it cannot, indeed, like other species of falcon, be trained to the chase; but if taken when very young, and fed with the food before mentioned, it may be taught to fly to some distance and then return, even in the midst of the largest cities.

THE LITTLE OWL.

Strix passerina, Linnæus; La Chevèche, ou Petite Chouette, Buffon; Die Zwergeule, Bechstein.

The feathers of this bird make it appear larger than it really is. Its length is from eight to nine inches, of which the tail measures at least three; the folded wings almost reach the extremity; the beak is ten lines in length, brown at the base, and yellow at the point; the iris is yellow in summer, and meadow green in winter; the claws blackish; the upper part of the body is light brown, with round white spots, which are largest on the back and shoulders; the lower part is white, spotted with dark brown and a little orange; the quill feathers dark brown. with white spots; the tail lighter, with red spots.

which may almost be taken for transverse bands. The colours are less brilliant in the female.

Habitation.—In its wild state this small species of owl frequents old buildings, towers, and church walls, where its nest is also found *.

In the house it must always be kept in a cage, which may be hung in the window, for if permitted to mix with the other birds it would kill them.

Food.—When wild its general food is mice and large insects; I have also found in the indigested remains which this, like other birds of prey, discharges from its stomach, a considerable quantity of the fruit of the red cornel tree (*Cornus sanguinea*, Linnæus). This proves that it also feeds on berries.

In the cage it may be kept for some time in good health, without having its excrements tainted, if fed on dried mutton: the skin, fat, and bones must be removed, and the meat left to soak in water for two days before it is eaten. Three quarters of an ounce a day of this meat dried will be sufficient, particularly if now and then some mice or birds be given it, which it swallows, feathers and all; it can devour as many as five mice at a meal. It begins to wake up at about two in the afternoon, and then becomes very lively, and soon wants its food.

Breeding.—The female lays two white eggs, which the male takes his turn to sit upon; the young ones may be very easily reared on fresh meat, particularly on pigeons. Before the first moulting the head is of a soft reddish grey clouded with white. The large round spots on the back become gradually more marked, and the reddish white of the under part by degrees acquires long streaks of brown on the breast and sides.

Diseases.—If great care be not taken sometimes to give it mice or birds, the fur and feathers of which cleanse the stomach, it will soon die of decline.

Mode of Taking.—When the place of its retreat during the day is discovered, it cannot fail to be taken if a net in the form of a bag or sack be placed over the mouth of the hole, for the bird will by this means entrap itself when endeavouring to come out for the evening.

Attractive Qualities.—This bird, which is very cleanly, always deposits its dung in one particular spot. Its singular motions are amusing, but its harsh cry, and restlessness, particularly during the season of copulation, are rather disagreeable. It is much used on the continent as a decoy, to entrap small birds.

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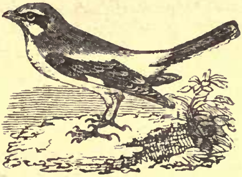
* It is rare in Britain.—Translator.

PIES.

The birds of this group have the beak a little flat, more or less hooked, generally in the form of a knife, and of a middling size. The feet are in general strong and short; the lower part, being much divided, may be used for walking or climbing. Their food consists of insects, worms, the flesh and remains of animals, seeds and fruit. In a few species the note is pleasing; several may be taught to speak; and some are admired for their handsome plumage.

THE GREAT BUTCHER BIRD.



Lanius Excubitor, Linnæus; Der gemeine Würger, Bechstein; La Pie-Grièche grise, Buffon.

It is a little larger than the Redwing (*Turdus Iliacus*, Linn.) Its length is nine inches, of which the tail measures three and three-quarters; the wings, when folded, cover one-third of the tail. The beak is eight lines in length; the iris is very dark brown; the shanks iron grey. All the upper part of the body is of a fine ash colour, shading off to white above the eyes, on the forehead, the shoulders, and the rump, The tail is wedge-shaped, white at the point, and black in the middle.

Habitation.—When wild, this species generally frequents groves, thickets, and the borders of forests; it is also found among brambles, and on lonely trees, always perched on the top. It never quits the abode it has once chosen, either in winter or summer. When caught it must be kept in a large wire cage. Its liveliness and desire for prey prevent its being permitted to mix with the other birds.

Food.—In its wild state, it feeds in summer on grasshoppers, crickets, beetles, and other insects, even lizards, and small adders, and when those fail, on mice and small birds: these, with mice, moles, and the like, form its winter food. When pursuing its prey, the shrike makes a particular movement, in order to seize it on the side; but it does not always succeed, as it cannot use its claws like birds of prey, and often only carries off a beakful of feathers.

In the cage, if the bird be taken when old, some mice, birds, or living insects, may be thrown to it, taking care to leave it quite alone, for as long as any one is present it will touch nothing; but as soon as it has once begun to feed freely it will eat fresh meat, and even become accustomed to the universal paste, described in the Introduction. This shrike eats very much for its size, at the least one ounce of meat at a meal. It likes to have a forked branch, or crossed sticks in its cage, across the angles of which it throws the mouse, or any other prey which has been given it, and then darting on it behind from the opposite side of the cage, devours every morsel, let it be ever so large. It bathes freely.

Mode of Taking.—Although it flies very swiftly when pursuing its prey, it may easily be taken if a nest of young birds, crying from hunger, be suspended to some lime twigs. In autumn and winter, it will sometimes dart on birds in cages which are outside the window. It may then be easily caught, if the cage be put into a sort of box, having the lid so placed that the bird by the least touch would cause it to fall upon itself. These means must be employed by those who wish to possess birds which they can let go and come at will.

Attractive Qualities.—Its cry somewhat resembles the *guir, guir* of the lark; like the nutcracker, it can imitate the different notes, but not the songs, of other birds. Nothing is more agreeable than its own warbling, which much resembles the whistling of the grey parrot; its throat at the time being expanded like that of the green frog. It is a great pity that it only sings during the pairing season, which is from March to May, and even then often spoils the beautiful melody of its song, with some harsh, discordant notes. The female also sings. As some of its tones resemble the human voice, it might probably be taught to speak.

THE LITTLE S

Lanius minor, Linnæus; Der graue Bechstein.

It is about the size of the sky-lark, being eight inches in length, of which the tail measures three and a half, the folded wings cover one-third. The beak is black, and seven inches in length; the iris brown; the legs of a lead-colour; the forehead black; a broad streak of the same colour passing from the beak across the eyes and over the cheeks; the tail is wedge-shaped; the exterior feathers are white, with a black spot.

The female only differs from the male in being a little smaller, the streak on the cheeks is shorter and narrower, and there is generally only one white feather in the tail.

Habitation.—Wild, it is a bird of passage, departing the first of September, and returning the beginning of the following May *. It generally frequents woods, orchards, and the hedges of fields. Always perched on the tops of trees, it rarely descends into the lower bushes. It feeds on insects.

In the house, it must have a large wire cage like the larks, but with three perches. It is not safe to let it mix with the other birds, as it would soon kill them.

Food.—In its wild state it feeds on beetles, cockchafers, crickets, breeze-flies, and other insects; when these fail, in consequence of a long continuance of rain, it sometimes seizes young birds.

In the house, if an old bird and lately taken, as soon as it is put in the cage, some living insects, or a small bird just killed, must be thrown into it. After some time, it will be satisfied with raw or dressed meat; but it is not always an easy task to get it to eat this food, for it will sometimes take eight successive days, during which meal worms and other insects are added; but as soon as it is accustomed to meat, it becomes so tame that it will feed from the hand, and if the cage door be opened it will even perch on the wrist to eat. Notwithstanding all my care, I have only been able to preserve those two years, which have been taken wild, they have all died of decline †; those, on the contrary, which have been reared from the nest, do not require so much attention, being contented with any kind of common food.

Breeding.—This bird generally builds in a tree on the edge of a wood, or in a garden, the nest being rather large and irregular. The young are fed on beetles and grasshoppers. In order to rear them, they must be taken from the nest when the tail begins to grow, and fed at first on ants' eggs, and afterwards on white bread soaked in milk.

Mode of Taking.—When the particular brambles and branches have been observed, on which this bird watches for its prey, it is not difficult to catch it; for notwithstanding its great quickness, it is not the less imprudent, for it allows itself to be caught in the bird-lime in the most stupid manner.

Attractive Qualities.—This species has no particular song: the female has none at all; but the male imitates, with wonderful facility, the songs of other birds, not only the detached parts, but the whole notes, so correctly that it would not be difficult to mistake it. Thus it imitates exactly, and in order, all the variations of the song of the nightingale, though more feebly, and like an echo, its notes not being so full and clear: it imitates equally well the song of the lark, and similar birds.

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* It is not a native of Britain.—Translator.

† Perhaps from not having been given now and then feathers, the fur and skin o animals, or even beetles, to cleanse the stomach.—Translator.

This wonderful power of imitation cannot fail to please amateurs, and make them wish to possess this interesting bird. I have observed that it likes best to repeat the call of the quail. One of this species which I had among my collection, always stopped its song, however lively, when it heard that of the quail, for the purpose of imitating it; the latter, before it was accustomed to this, became very jealous, and as soon as it heard it, ran about in every direction, furiously endeavouring to fight its fancied rival.

THE WOODCHAT.

Lanius erythrocephalus. Lan. Collurio, rufus, et pomeranus, LINNÆUS; La Pie Grièche rousse, BUFFON; Der rothköpfige Würger, BECHSTEIN.

THIS is smaller and more delicate than the former species, being only seven inches long, of which the tail measures three and a half; the folding wings cover one third; the beak is eight lines in length, and black; the iris greyish yellow; the shanks bluish black; the forehead black, from the base of which a band of the same colour extends over the eyes. The tail feathers are also black, but the outer ones only so to the middle, the rest being white.

The female only differs from the male in its colour being less brilliant.

HABITATION.—When wild it is a bird of passage, arriving at the end of April, and departing about the middle of September*. It inhabits mountains, forests, and wooded plains, but prefers enclosed pastures where horses are kept day and night.

In confinement it requires the same treatment as the preceding.

FOOD.—In its wild state it prefers beetles, the dung of cows and horses maybugs, grasshoppers, breeze-flies, and other insects; it often also darts upon lizards and young quails.

In a state of confinement it is fed like the preceding; but being most delicate it is better to rear it from the nest, feeding it on raw meat. If an old bird be taken, it is impossible to preserve it unless it be constantly fed on live insects.

BREEDING.—The woodchat commonly builds its nest on the thick and bushy branches of large trees, and makes it of small sticks, moss, hogs' bristles, wool and fur. The female breeds twice, laying each time six reddish-white eggs, marked particularly at the large end with distinct red spots, mixed with pale ones of a bluish grey. The young ones are hatched in fifteen days; their colour, before the first moulting, is on the upper part, dirty white, spotted with grey; the under part is also dirty white.

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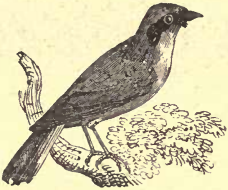
* It is doubtful as a native of Britain.—TRANSLATOR.

clouded with pale grey; the wing coverts are bordered with rust colour; the quill feathers and tail are black.

Mode of Taking.—A cruel method, but the surest, is to place birdlime on its nest, this being the most wary species of shrike; but as it bathes freely it may be taken about the middle of the day at its washing place, if near hedges. It is often found drowned in large ponds.

Attractive Qualities.—Although this species appears endowed with as good a memory as the preceding, its notes are less agreeable, not being so soft, and it introduces some stanzas of its own shrill and harsh warbling into the songs that it imitates, which are those of the nightingale, linnet, redstart, and goldfinch. But this bird is most admired for its beautiful plumage.

THE FLUSHER.



Lanius spinitorquus, Bechstein; Lanius Collurio, Linnæus; L'Ecorcheur, Buffon; Der rothrückige Würger, Bechstein.

This pretty species seems to form a connecting link between the pies and the singing birds, so much does it resemble the latter in its different qualities. Its length is a little more than six inches, of which the tail measures three and a quarter. The wings, when folded, cover one third. The beak is black, and the iris of the eyes light brown; the legs, bluish black.

In the male, the head, the nape of the neck, the tail coverts, and the thighs, are grey. This colour is lighter on the forehead and above the eyes. A black band extends from the nostrils to the ears. The beak and wing coverts are of a fine red brown; the rump and under part of the body white, slightly tinged with pink on the breast, sides, and belly; the centre tail feathers are entirely black, the others white at the tip.

The colours in the female differ considerably from those of the male. All the upper part of the body is dirty reddish brown, slightly shading into grey on the upper part of the neck and rump; there is a scarcely visible shade of white on the back and shoulders; the forehead and above the eyes is yellowish, the cheeks brown, the throat and belly dirty white; the under parts of the neck, breast, and sides, are yellowish white, crossed with waving brown lines; the quill feathers are dark brown, the outer ones edged with white, the others to the four centre ones have only a white spot; the tail dark brown, with some shades of orange.

Habitation.—When wild it is one of the latest birds of passage, as it does not arrive till May. It is sometimes found in woody valleys where cattle graze, more commonly in hedges, and fields with bushes in them, or in inclosed pastures where horses and cows are kept. It is one of the first migratory birds to depart, which it does in August, in families, even before the young ones have moulted.

In the house, it must be treated like the former, and kept in a wire cage, for it would soon kill its companions, as I experienced some years ago. The bird I refer to had been three days without eating, although I had given him a great variety of dead birds and insects. On the fourth day I set him at liberty in the room, supposing him too weak to hurt the other birds, and thinking that he would become better accustomed to his new food if I left him at liberty. Hardly was he set free than he seized and killed a dunnock before I had time to save it; I let him eat it, and then put him back into the cage. From this time, as if his fury were satisfied, he ate all that was given him.

Food.—In its wild state, it eats large quantities of beetles, maybugs, crickets, and grasshoppers, but it prefers breeze-flies, and other insects which teaze the cattle. It impales as many of these insects as it can catch for its meal on the thorns of bushes. If, during a long continuance of rain, these insects disappear, it then feeds on field-mice, lizards, and young birds, which it also fixes on the thorns.

When confined, its food is the same as the preceding species. Some insects, mixed with the nightingales' paste, make it more palatable for it. A little raw or dressed meat may also be given it from time to time.

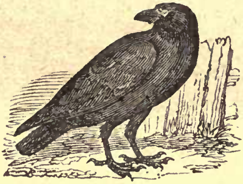
Breeding.—When the season is favourable this species breeds twice, and generally chooses a large hawthorn bush in which to build its nest, roots and coarse stubble forming the base of it, then a layer of moss interwoven with wool, and the finest fibres of roots lining the interior. The female lays from five to six greenish white eggs, spotted all over, especially at the large end, and speckled with red and grey; the male takes his turn with the female to sit during fourteen days. Before moulting, the young ones resemble the female in colour. The back and breast are greenish grey, streaked with several waving brown lines; the belly is dirty white. They can be easily reared by feeding them at first with ants' eggs, then with dressed meat, and afterwards with white bread soaked in milk: this last food it always likes if early accustomed to it.

Mode of Taking.—As soon as this bird arrives in May, the bushes on which it most frequently perches must be observed; these are very few, and on them the lime twigs must be placed; it is often entrapped within a quarter of an hour. Success is more certain if a beetle, maybug, or breeze-fly, be fastened near the lime twigs with horse hair, by two feet, so that it can move its wings. As soon as the bird is stuck in the bird-lime it is necessary when taking it to avoid its beak, as it pecks very hard.

Attractive Qualities.—This bird does not rank low among the singers; its song is not only very pleasing but continual. While singing, it is generally perched on a lonely bush, or on the lower branches of a tree, but always near its nest. Its warbling is composed of the songs of the swallow, goldfinch, fauvette, nightingale, redbreast, and lark, with which, indeed, it mixes here and there some of its own harsh notes. It almost exclusively imitates the birds in its immediate neighbourhood; it very rarely repeats the song or call of those which merely fly past it; when it does, it seems only in mockery. There are, however, some songs which it cannot imitate: for instance, that of the chaffinch and yellow-hammer, its throat not seeming to be sufficiently flexible for these. In the house, its song is composed of the warbling of those birds whose cages are hung near it. It is very lively, and its plumage is handsome.

If a room is to be cleared of flies, one of these birds set at liberty in it will soon effect it; it catches them flying with great skill and agility. When a thorny branch is given it, it impales all its flies, making at the same time the drollest and most singular movements. This species easily and quickly learns to whistle airs, but it forgets them with the same facility, in order to learn new ones.

THE RAVEN.



Corvus Corax, Linnæus; Le Corbeau, Buffon; Der Kolkrabe, Bechstein.

This and the three following species ought not to be reckoned among house birds; but as they are easily taught to speak, and are often reared for that purpose, I must not neglect to mention them here.

The raven is well known. Its length is two feet, of which the tail measures eight inches and three quarters. The colour, which is black, in particular lights reflects a violet tint on the upper, and green on the lower part of the body, of the wings and tail. The throat is of a paler black.

Of all the birds of this genus, distinguished by having the beak in the form of a knife, and the base furnished with strong bristles which extend forward, the raven, on account of the size of its tongue, is the best fitted to articulate words; hence, in Thuringia, people are often saluted, on entering an inn, with some abusive language from one of these ravens, confined near the door, in a large cage like a tower. When it has been reared from the nest (which must be done in order to teach it to speak) it may be left at liberty; it will come when called by name to receive its food. Everything which shines must be put out of its way, particularly gold and silver, as it does not fail to carry it off, like the other birds of its kind. One, which was brought before Augustus, had been taught to repeat, *Ave Cæsar, victor, imperator*, in order to salute him on his return from victory.

Some people are accustomed to cut what is called the nerve of the tongue, supposing that it would make them better able to articulate sounds; but it seems most probable that this cruel practice is of little use, and, like many others, only a vulgar prejudice, for I have heard ravens speak perfectly well without having the tongue touched.

This bird was very much prized at a time when divination made a part of religion. Its most minute actions, all the motions of its flight, and the different sounds of its voice, were carefully studied; in the latter, people pretending to discover even sixty-four different modulations, besides many shades still more delicate and difficult to determine. This must certainly have required an excessively fine ear, as its croaking is particularly simple. Every alteration, let it be ever so slight, had its particular signification. Impostors were not wanting, who pretended to understand, or dupes who easily believed, these idle fancies. Some have carried their folly to such a pitch as to persuade themselves that by eating the heart and entrails of the raven they would acquire its gift of prophecy.

Habitation.—This species only inhabits the wooded parts of a country; it there builds its nest on the highest trees. Its eggs, from three to five in number, are of a dirty green, streaked with olive brown. If the young ones be taken in order to instruct them, they must be removed on the welfth day after bursting the shell, when they have only half their feathers. They are fed on meat, snails, worms, and bread soaked in milk; after a little time they will eat bread, meat, and any refuse from the table. In its wild state the raven eats leverets, birds' eggs, mice, young goslings, chickens, and snails, and even pears, cherries, and other fruit; this shows us that it is rather hurtful as well as useful.

THE CARRION CROW.

Corvus corone, Linnæus; La Corneille, Buffon; Die Schwarze Krähe, Bechstein.

It only differs from the preceding in its size, and in the tail being rounded instead of wedge-shaped. Its whole length is eighteen inches. Its plumage is black, with some tints of violet on the upper part of the body.

Peculiar Qualities.—The carrion crow is one of the commonest birds; in the groves, which it likes best, it congregates in such numbers that twenty nests have been built on the same tree *; the eggs are spotted with grey or olive brown on a green ground. The young may be taken from the nest in the month of March, or even earlier if the winter be mild they are treated and fed like the former species. The carrion crow is even more easily tamed, for I have seen old ones, which have been taught to go and come, and others in their wild state, which have regularly fed in the yard going in the spring to breed in the woods, and returning at the beginning of the winter to pass that season in a domestic state. Insects, worms, mice, fruit, and grain form its principal food in its wild state.

Mode of Taking.—The easiest and most usual method is with paper cones, at the bottom of which is put a bit of meat, and bird-lime on the inner edges. It may also be caught with lime twigs placed in the yard, or before the house, on horse dung and among scattered grain.

THE HOODED CROW.

Corvus Cornix, Linnæus; La Corneille Mantelée, Buffon; Die Nebelkrähe. Bechstein.

This species, a little larger than the preceding, is grey, with the head, throat, wings, and tail black. In the winter it is found over almost all Europe, but during summer it inhabits

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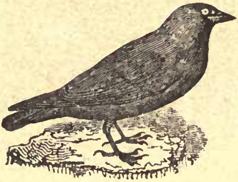
* The rook, (*Corvus frugilegus*, Linnæus,) seems here to be confounded with the carrion crow. I say nothing about this species, as I have never heard of one being tamed or instructed. It is about the size of the carrion crow, and chiefly differs from it in the base of the beak being naked, and having a rough scabrous skin.—Translator.

more northern parts, where it builds in groves and orchards near open fields: its eggs are bright green streaked and spotted with brown.

If taken young it is tamed and taught to speak more easily than the carrion crow.

THE JACK-DAW.



Corvus Monedula, LINNÆUS; Le Chocas, BUFFON; Die Dohle, BECHSTEIN

THIS bird is naturally half tame, and if reared from the nest it will voluntarily remain in the yard with the poultry. It makes its nest in old buildings, houses, castles, towers, and churches: its eggs are green, spotted with dark brown and black. It is not so much to teach it to speak that people like to rear young jack-daws, but to see it go and return at call. Even old ones that are taken in autumn may be accustomed to this, cutting the wings at first, and again in the spring, so that as they grow again the bird learns by degrees to come to a certain call. During winter it will always come into the yard. The size of the jack-daw is that of the pigeon, thirteen or fourteen inches in length. The back of the head is light grey, the rest of the body black. When in winter it eats wild garlic. in the fields it smells very strongly of it, and does not lose the scent till it has been a week in the house.

THE JAY.

Corvus glandarius, LINNÆUS; Le Geai, BUFFON; Der Holzeher, BECHSTEIN.

I HAVE often, during my youth, seen this beautiful species of bird among the peasants of Thuringia confined in cages, and taught to speak. It is about the size of the preceding bird. Its black beak is in shape like that of the carrion crow. The feet are brown, with a slight shade of flesh colour. All the smaller feathers are soft and silky. A purple grey is the most predominant colour; the throat is whitish, the eyes are reddish blue, the rump white; the large coverts have the outer side of the feathers ornamented with small but very brilliant bands, alternately bluish white, light blue, and bluish black, which softly blend one into the other, like the colours in the rainbow, and are a great ornament to the bird.

The only difference in the female is that the upper part of the neck is grey, whereas in the male it is much redder, and that colour also extends to the back.

Habitation.—When wild, the jay frequents woods; above all, those in which there are firs mixed with other trees.

In the house it must be kept in a large cage in the form of a tower, or in any other shape; it is too dirty a bird to be let range at liberty.

Food.—In its wild state it prefers worms, insects, and berries, when acorns and beech-mast fail: it makes great havoc among cherries.

In the cage, it soon becomes accustomed to bread soaked in milk, but it will eat almost any thing, bread, soft cheese, baked meat, and all that comes from table; acorns and beech-mast however are its favourite food. It must be kept very clean, otherwise its soiled and dirty plumage would make it look to great disadvantage. It is better to feed it entirely on corn; it becomes by this means less dirty, and its execrements are not so soft or fœtid. It may be preserved for several years on this food. It must always have fresh water given it, as much for drinking as for bathing.

Breeding.—The jay builds in beech-trees, oaks, and firs. Its eggs are grey spotted with brown. The young which are to be taught to speak must be taken from the nest after the fourteenth or fifteenth day, and fed on soft cheese, bread, and meat: it is easily taught and domesticated. Those which are caught when old cannot be tamed; they are always frightened when any one approaches them, hiding and fasting for several hours afterwards rather then re-appear.

Mode of Taking.—Should any one wish to catch these birds, he must seek in autumn for a lonely tree, about five or six paces from the other trees of the wood, which the birds frequent most; on it lime twigs must be placed. In order to effect this, most of the branches are cut off in such a manner as to form a kind of spiral staircase, commencing about ten or twelve feet from the ground, and extending to within six of the top. After having shortened and reduced the branches to five or six spans in length, the lime-twigs are fixed to them; under the tree must be placed a hut, made of green branches, large enough to contain as many persons as wish to conceal themselves; on the top of this hut is placed a live owl, or one made of clay; even the skin of a hare arranged so that it may be moved, will suffice. Nothing is now wanting to attract the jays but a bird-call, which is made of a little stick with a notch cut in it and a little piece of the bark of the cherry-tree inserted, another bit serving for a cover. On this instrument the voice of the owl, the great enemy of the jays, may easily be imitated; and as soon as they hear it they come from all sides, while their cries must be repeated by the people in the hut, which makes them assemble in still greater numbers. They are soon entangled in the bird-lime, and fall pell mell into the hut, their weight easily dragging them through the slight covering. Many other birds also collect on hearing the deceitful call, and, wishing to assist their brethren, are themselves entrapped. Thus, in a few hours many jays and a great number of other birds may be caught, such as magpies, thrushes, wood-peckers, redbreasts, and tits. Twilight is the best time for this sport.

In the month of July jays may also be taken in the *water-trap*, where young ones, with their tails only half grown, are most frequently caught; these may yet be taught and tamed.

Attractive Qualities.—Although it is easy to teach the jay to speak, it will in general only repeat single words; but it imitates passably well little airs on the trumpet and other short tunes. Its beautiful colours are a great attraction. It may also be taught to go and come, if in the country: but in the city it is not so easily taught this as crows and ravens.

THE NUT-CRACKER.

Corvus Caryocatactes, Linnæus; Le Casse-noix, Buffon; Der Tannenheher, Bechstein.

Its length is twelve inches, of which the tail measures four and three quarters; the wings, when folded, reach the middle. The beak and feet are black; the iris is reddish brown. Though speckled like the starling, its general colour is blackish brown, lighter above, and darker underneath the body. The tail feathers are black, but white at the tip.

The general colour of the female is a redder brown than that of the male.

Habitation.—In its wild state it inhabits, during summer, the depth of woods, near which there are meadows and springs, and it does not quit this retreat till autumn, when it frequents those places where it can find acorns, beech-mast, and nuts. During hard winters it may sometimes be seen on the high road, seeking its food amongst the horse-dung.

In the house it is kept like a jay.

Food.—In its wild state, having a very strong beak, it can open the cones of the pine and fir, peel the acorns and beech-mast, and break the nut-shells. It also eats different sorts of berries, but prefers animal food and insects, in short, any thing it can get.

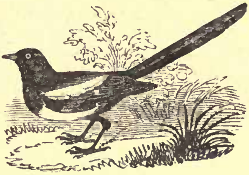
In confinement it must be fed like the jay; but it is more easily tamed, and accustomed to use different words. It is so fond of animal food, that if a live jay were thrown into its cage it would kill it and eat it in a quarter of an hour; it will even eat whole squirrels which have been shot, and which other small birds of prey fly from with disgust.

Breeding.—Its nest, placed in a hollow tree, generally contains five or six eggs, with transverse brown streaks scattered on a dark olive grey ground. The young are reared on meat.

Mode of Taking.—It may be taken in autumn by a noose, hanging service berries to it; success is more sure if some nuts be put near. It may also be taken in the *water-trap*.

Attractive Qualities.—Its actions are as amusing as those of a shrike; it imitates the voice of many animals, and chatters as much as the jay. To judge from the form of its tongue, it seems possible to teach t to speak, if attempted when young.

THE MAGPIE.



Corvus Pica, Linnæus; La Pie, Buffon; Die Elster, Bechstein.

As the magpie generally frequents places near the abode of man, it is well known. It is eighteen inches in length, of which the tail alone measures ten. It may be called a handsome bird, although its plumage is only black and white, for these colours are perfect in their kind, and the tail, near the end, shines with a purple tint, gradually shading into steel blue.

Habitation.—The magpie builds its nest on trees which are near towns and villages; its eggs are pale green, speckled with grey and brown. In autumn the young ones assemble together in small parties.

Food.—When wild, the magpie lives on worms, insects, fruits, or roots, and sometimes eats eggs and young birds in their nest.

In the house, it likes bread, meat, and anything that comes from table; in short, when once tamed it does not fail to enter by the window at meal times to take its share. If it obtain too much, it hides what it does not eat for another time. This propensity is seen in young ones as soon as they can feed alone.

Peculiar Qualities.—Although in its wild state the magpie is so suspicious that it is difficult to catch it, it is, however, more easily tamed than any other bird; it will let itself be touched and taken in the hand, which even the most docile of other birds will seldom suffer. When reared from the nest it learns to speak even better than the raven, and becomes as domestic as the pigeon. It gets so fond of raw meat, bread, and other refuse of the table, that it does not wish any other food; this is the cause of its frequenting dwelling-houses: if it find any worms or insects it only eats them as dainties.

The time of taking magpies in order to bring them to this point is fourteen or fifteen days after coming out of the shell: this is the principal thing to remember with respect to any bird which is to be taught to go and come. It must be given at first bread soaked in milk or water; by degrees a little chopped meat is added, afterwards it will eat anything from the kitchen, even apples and baked pears, and any refuse. As soon as the young birds begin to fly high enough to rise to a neighbouring tree they may be let do so when they have had a good meal, soon calling them back again to the place fixed for their habitation; this practice may be repeated till they have all their feathers, and can fly well, when some of their wing-feathers must be cut, till the winter, a season in which they may be pulled out. Whilst the feathers are growing again, they become so well accustomed to the house and their master that they may be let go for several hours together without any danger of their wandering or not returning. If they speak they will only be the more agreeable.

Old magpies, which may easily be taken in winter with lime-twigs placed near some bits of meat, can be taught to remain in the yard by keeping the wings cut till the following autumn, when they may be let grow; from this time there is no fear of their not coming with the poultry, and in spring they will not fail to build near the house, and seek food for their young in the kitchen. I must repeat again that nothing shining must be left in the way of these birds, as they will carry it off immediately, and hide it with great care, let them have as much food as they like besides.

I have lately received a letter from one of my friends, in which he expresses himself thus:—"I have reared a magpie which comes like a cat to rub itself against me until I caress it. It has learnt of itself to fly into the country and return. It follows me everywhere, even for more than a league, so that I have much trouble to rid myself of it, and when I do not wish its company in my walks and visits I am obliged to shut it up: though wild with any other person, it marks in my eyes the least change in my temper. It will sometimes fly to a great distance with other magpies, without however connecting itself with them."

THE ROLLER.

Coracias Garrula, Linnæus; Le Rollier d'Europe, Buffon; Die Mandelkrähe, Bechstein.

This bird resembles the jay in size and form, and is twelve inches in length, of which the tail measures four and a half; the beak is blackish, before and behind the eyes is a blackish triangular spot, formed by the naked skin; the iris of the eye is grey; the whole of the head, the neck, the throat, the breast, the belly, the large wing-coverts, and all the under-coverts, are of a beautiful bluish green; the tail is of a dusky blue green near the base, becoming gradually lighter towards the end.

The female and young ones of the first year have the head, neck, breast, and belly of a reddish grey tinged with bluish green; the back and the last quill-feathers are of a light greyish brown; the rump is green, tinged with indigo; the tail blackish with a tint of blue green; the rest like the male.

HABITATION.—In its wild state the roller may be found in Europe and the northern parts of Africa; it only frequents a few spots in Germany, and prefers forests and sandy plains to high mountains: elsewhere it is only seen during the time of its passage*.

In the house it may be let range at will after the wings are clipt.

FOOD.—When wild, its principal food is insects and worms; it also eats small frogs, bulbous roots, acorns, and grains of corn.

BREEDING.—The nest, placed in the hole of a tree, is made of small twigs, hay, feathers, and bristles. It lays from four to seven white eggs, on which the male takes his turn to sit during eighteen or twenty days. The young ones do not acquire their fine colours till the second year; previous to this period the head, neck, and breast are of a whitish grey.

I had till lately thought that this bird was untamable; but Dr. Meyer of Offenbach has convinced me to the contrary, having himself reared them several times, and kept them in his room. This is his method:

The young ones must be taken from the nest when only half grown, and fed on little bits of cow's heart, or any other meat which is lean and tender, till they can eat alone; small frogs, worms, and insects may then be added. The means which it takes to kill and swallow these insects are curious enough; it begins by seizing and crushing them with its beak, and then throws them into the air several times, in order to receive them in its throat, which is very capacious. When the piece is too large, or the insect still alive, it strikes it hard against the ground, and begins again to throw it in the air, till falling not across, but so as to thread the throat, it may be easily swallowed.

After having been fed thus long enough, a little barleymeal may be mixed with the meat. I have even brought it to eat bread, vegetables, and softened oatmeal, but it always prefers cow's heart. I have never seen it drink.

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* It appears that in its course from Sweden to Algiers it does not range beyond a degree in longitude, and is rarely found in Britain. Few birds of this group, as far as has hitherto been observed, wander to the right or left during their migration. The roller frequents shady and solitary woods, and its character is well adapted to them.—TRANSLATOR.

It knows the person who takes care of it, comes at his call to eat from his hands, without however letting itself be caught: but it never becomes quite tame, and often defends itself with its beak. It makes very few movements unless to seek its food, and generally remains quite still in the same place. If it ever hops about the room it is in an awkward and cramped manner, on account of its short feet; on the other hand, it flies very well; but it must not be left completely at liberty in the room, or quite shut up in the cage, because it is so easily startled, and in its fright gives itself such violent blows on the head as would soon kill it. The best way is to clip one wing, and then let it range the room. These birds quarrel with one another, particularly in the evening, for their places on the perch. I have kept them for some time in a large aviary with small and great birds, and once with my pigeons which I kept shut up; generally I have them in my room, where they mix with several other birds: but whether alone or with companions they appeared equally healthy and active.

ATTRACTIVE QUALITIES.—They have few other attractions besides their beautiful plumage, for their voice is only a harsh croaking "*crag, crag, craag**."

THE GOLDEN ORIOLE.

Oriolus Galbula, LINNÆUS; Le Loriot, BUFFON; Der Pirol, BECHSTEIN.

THIS species, the male of which is very beautiful, is about the size of a blackbird. Its length is nine inches, of which the tail measures three and a half, and the beak one. The head, neck, back, breast, sides, and lesser wing-coverts, are of a brilliant golden yellow; the wings and the tail are black, with yellow gradually increasing to the outer feathers.

The female is not so brilliant, the golden yellow is only visible at the tip of the olive feathers in the tail, and in the lesser and under wing-coverts. All the upper part of the body is of the green colour of the siskin, the lower part greenish white with brown streaks, and the wings grey black.

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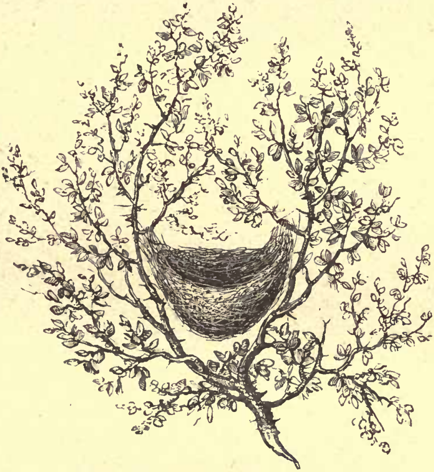
* I once saw one of these birds drink, after swallowing dry ants' eggs; it then eat greedily of lettuce and endive. Another, which I kept, liked the outside of lettuces and spinach after having eaten insects, especially beetles, which are very heating. To judge from what I have observed, the roller is by nature wild and solitary; it seldom changes its situation, except to seek its food or to hide itself from strangers. It is a good thing, whether kept in a cage or let range, always to have a box in its way, in which it may take refuge when frightened; it will not fail to hide itself there, and by this means will not be tempted to beat itself violently, which it does when it cannot fly from the object of its fright. It knows its mistress very well, lets her take it up, comes near her, and sits without any fear on her knees for whole hours without stirring. This is as far as it goes even when tamed. It is neither caressing nor familiar; when frightened it utters harsh cries, softer ones when its food is brought, but "*crag, crag, craag*," at the same time raising its head, is the expression of its joy or triumph.—TRANSLATOR.

Habitation.—When wild, it generally frequents lonely groves, or the skirts of forests, always keeping among the most bushy trees, so that it is rarely seen on a naked branch; it always frequents orchards during the time of cherries. It is a bird of passage, departing in families in August, and not returning till the following May *.

In the house, if it cannot be let range at pleasure, it must be confined in a large wire cage.

Food.—When wild, its food is insects and berries. In confinement, and if an old one be caught by means of the owl, like the jays, it must be kept at first in a quiet and retired place, offering it fresh cherries, then adding by degrees ants' eggs, and white bread soaked in milk, or the nightingale's food. But I confess there is great difficulty in keeping it alive, for with every attention and the greatest care, I do not know a single instance of one of this species having been preserved for more than three or four months



NEST OF THE GOLDEN ORIOLE.

Breeding.—The scarcity of the golden oriole arises from its breeding but once a year. Its nest, hung with great art in the fork of a small bushy branch, is in shape like a purse, or a basket with two handles. The female lays four or five white eggs, marked with a few black streaks and spots. Before the first moulting, the young ones are like their mother, and mew like cats. If any one wishes to rear them they must be taken early from the nest; fed on ants' eggs, chopped meat and white bread soaked in milk, varying these things as their health requires, and as their excrements are too frequent or too soft. In short, they may be accustomed to the nightingale's food. I must here remark that a very attentive person alone can hope to succeed *.

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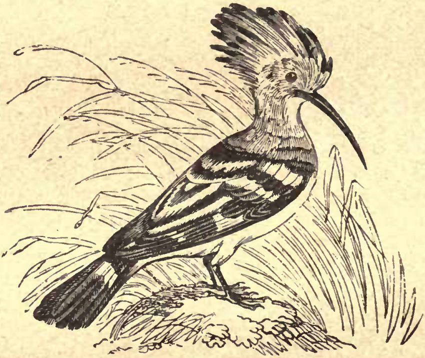
* It is rarely found in Britain.—Translator.

Attractive Qualities.—I have seen two golden orioles that were reared from the nest, one of which, independent of the natural song, whistled a minuet, and the other imitated a flourish of trumpets. Its full and flute-like tones appeared to me extremely pleasing. Unfortunately the fine colours of its plumage were tarnished, which almost always happens, above all if the bird be kept in a room filled with smoke, either from the stove or from tobacco. One of my neighbours saw two golden orioles at Berlin, both of which whistled different airs.

Its note of call, which in the month of June so well distinguishes the golden oriole from other birds, may be well expressed by "ye, puhlo †."

THE HOOPOE.



Upupa Epops, Linnæus; La Huppe, Buffon; Der gemeine Wiedehopf, Bechstein.

The length of this bird is twelve inches, of which the tail measures four, and the bill, which is black, two and a half.

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* These young birds like to wash; but it is dangerous for them to have the water too cold, or to let them remain too long in it, as cramp in the feet may be the consequence. In one which we possessed, the accident was more vexatious as the bird was otherwise in good health, having followed the above mentioned diet.—Translator.

† The natural song is very like the awkward attempts of a country boy with a bad musical ear to whistle the notes of the missel thrush.—Translator.

The iris is blackish brown. The feet are black and very short. There is a tuft on the head like a fan, formed of a double row of feathers, all of them tipped with black.

Habitation.—In its wild state, the hoopoe remains, during summer, in woods near meadows, and pasture land. In the month of August, after hay-harvest, it goes in flocks into the plains; it departs in September, and does not return till the end of the following April. It is more frequently seen on the ground than perching *.

In the house, it is not kept in a cage, but let range at will; it is very chilly, at least it is so fond of warmth that it is constantly on the stove, and would rather let its beak be dried up than come away from it.

Food.—When wild, it may be continually seen in fields, searching for its favourite insects among cow dung and the excrements of other animals. Some people put it into their granaries to clear them of weevils and spiders; this has succeeded very well, but to say that it also eats mice, is certainly an error.

In the house, it may be easily reared on meat, and white bread soaked in milk, to which meal worms must be added from time to time.

Breeding.—The hoopoe lays from two to four eggs; its nest, placed in the hole of some tree, is a mixture of cow dung and small roots. The young are easily reared on the flesh of young pigeons; but they cannot pick it up well, because their tongue, about the size of half a bean, and heart-shaped, is too short to turn the food into the throat. They are obliged to throw their food in the air, holding the beak open to receive it.

Mode of Taking.—In the month of August, when a field has been observed which the bird frequents most, a small well-limed rod of about eight inches in length must be placed on a mole-hill, having two or three meal worms fastened to it by means of a thread about three inches long. As soon as the hoopoe sees the worms it darts upon them, and thus makes the lime twig fall upon itself, which embarrasses it. But these birds, whether taken young or old, can very rarely be preserved.

Attractive Qualities.—Independently of its beauty, its droll actions are very amusing. For instance, it makes a continual motion with its head, tapping the floor with its beak, so that it seems as if it walks with a stick, at the same time shaking its crest, wings, and tail †. I have had several of them in my house, and have always been diverted by their singular grimaces. When any one looks at them steadily, they immediately begin their droll tricks.

The following is an extract from a letter written by M. von Schauroth on the hoopoe, which I think it is well to insert here:

"With great care and attention, I was able last summer to rear two young hoopoes, taken from a nest which was placed at the top of an oak tree. These little birds followed me everywhere, and when they heard me at a distance showed their joy by a particular chirping, jumped int the air, or as soon as I was seated climbed on my clothes, particularly when giving them their food from a pan of milk, the cream of which they swallowed greedily; they climbed higher and higher, till at last they perched on my shoulders, and sometimes on my head, caressing me very affectionately: notwithstanding this, I had only to speak a word to rid myself of their company, they would then immediately retire to the stove. Generally they would observe my eyes to discover what my temper might be, that they might act accordingly. I fed them like the nightingales, or with the universal paste, to which I sometimes added insects; they would never touch earth-worms, but were very fond of beetles and May-bugs, these they first killed, and then beat them with their beak into a kind of oblong ball; when this was done, they threw it into the air, that they might catch it and swallow it lengthways; if it fell across the throat they were obliged to begin again. Instead of bathing, they roll in the sand. I took them one day into a neighbouring field, that they might catch insects for themselves, and had then an opportunity of remarking their innate fear of birds of prey, and their instinct under it. As soon as they perceived a raven, or even a pigeon, they were on their bellies in the twinkling of an eye, their wings stretched out by the side of their head, so that the large quill feathers touched: they were thus surrounded by a sort of crown, formed by the feathers of the tail and wings, the head leaning on the back, with the beak pointing upwards; in this curious posture they might be taken for an old rag. As soon as the bird which frightened them was gone they jumped up immediately, uttering cries of joy. They were very fond of lying in the sun; they showed their content by repeating in a quivering tone, "*vec*, *vec*, *vec*;" when angry their notes are harsh, and the male, which is known by its colour being redder, cries "*hoop*, *hoop*." The female had the trick of dragging its food about the room, by this means it was covered with small feathers and other rubbish, which by degrees formed into an indigestible ball in its stomach, about the size of a nut, of which it died. The male lived through the winter; but not quitting the heated stove, its beak became so dry that the two parts separated, and remained more than an inch apart: thus it died miserably."

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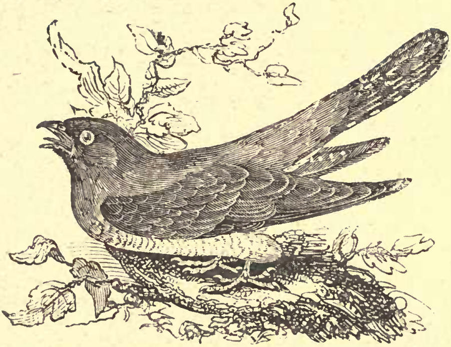
* It is not common in Britain.—Translator.

† It may be added that it also walks very gracefully.—Trans

"I once saw," says Buffon, "one of these birds which had been taken in a net, and being then old, or at least adult, must have had natural habits: its attachment to the person who took care of it was very strong and even exclusive. It appeared to be happy only when alone with her: if strangers came unexpectedly it raised its crest with surprise and fear and hid itself on the top of a bed which was in the room. Sometimes it was bold enough to come from its asylum, but it fled directly to its beloved mistress, and seemed to see no one but her. It had two very different tones; one soft, as if from within, and seemed the very seat of sentiment, which it addressed to its mistress; the other sharp, and more piercing, which expressed anger and fear. It was never kept in a cage by day or night, and was permitted to range the house at pleasure; however, though the windows were often open, it never showed the least desire to escape, its wish for liberty not being so strong as its attachment."

"This pretty bird accidentally died of hunger. Its mistress had kept it for four months, feeding it only on bread and cheese."



Cuculus canorus, Linnæus ; Le Coucou, Buffon ; Der gemeine Kukuk, Bechstein.

Although it is not larger than the turtle-dove, its length is fourteen inches, but seven of these are included in the tail, three quarters of which are covered by the folded wings. The beak, black above, and bluish beneath ; the feet have two claws before and two behind. The head, the top of the neck, and the rest of the upper part of the body are of a dark ash colour, changing like the throat of the pigeon on the back and wing-coverts.

In the female, which is smaller, the upper part of the body is of a dark brown, with dirty brown spots, which are scarcely visible. The under part of the neck is a mixture of ash grey and yellow, crossed with dark streaks. The belly is of a dirty white, with dark transverse lines.

Habitation.—When wild, it is a bird of passage, which arrives in April and departs in September, and even much sooner, according to an English observer.

In the house, it may be let run about, or confined in a large wooden cage.

Food.—When wild, it eats all sorts of insects, particularly caterpillars on trees.

When confined, it is fed with meat, insects, and the universal paste made of wheat-meal.

Breeding and Peculiarities.—Every one knows that the female cuckoo never sits upon her eggs, but intrusts that care to other birds, particularly those which feed on insects, laying one or two eggs in their nest.

In order to tame a cuckoo, it must be taken from the nest: I never tried myself, but several of my friends have. As this is a curious bird, and most bird-fanciers like to have it in their room or aviary, I shall here insert some observations on this subject, by M. von Schauroth, who was before quoted.

"The cuckoo possesses hardly any qualities which would render it fit to be a house bird: if old, it is too obstinate and voracious, generally it is furious, sullen, and melancholy. I have reared several; the last was taken from the nest of a yellow-hammer: its eyes were not opened when I took it, yet it darted at me with fury. Before I had had it six days it would swallow in a passion everything that came near it. I fed it on bird's flesh, and was obliged to continue this food for a long time before it could feed itself. Its motions were so quick in jumping or moving that it would overthrow any cups of food which happened to be in its way. Its tail grew very slowly. It was never entirely tamed; it would dart at my hands and face, attacked every thing which came too near it, and even the other birds. It ate the poultry paste in great quantities, and discharged in proportion, which made it very dirty; I have even seen it, like the ostrich, eat its own excrements. Its short and climbing feet are so awkward that it cannot walk; it makes two or three jumps, but flies very well."

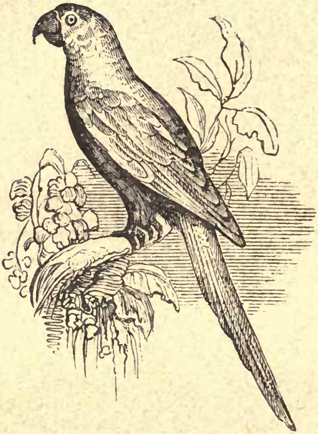
"Though cunning and solitary," says Buffon, "the cuckoos may be given some sort of education. Several persons of my acquaintance have reared and tamed them. They feed them on minced meat, either dressed or raw, insects, eggs, soaked bread, and fruit. One of these tamed cuckoos knew its master, came at his call, followed him to the chase, perched on his gun, and if it found a cherry tree in its way it would fly to it, and not return till it had eaten plentifully; sometimes it would not return to its master for the whole day, but followed him at a distance, flying from tree to tree. In the house it might range at will, and passed the night on the roost. The excrement of this bird is white, and in great quantities; this is one of the disagreeables in rearing it. Great care must be taken to keep it from the cold from autumn till winter; this is the critical period for these birds, at least it was at this time that I lost all which I had tried to rear, besides many other birds of a different species"

THE MINOR GRAKLE.

Graccula religiosa, Linnæus; Mino ou Mainate, Buffon; Der Mino oder Plauderer, Bechstein.

This bird is the size of a blackbird, ten inches and a half long, of which the tail measures three, and the beak one and a half. The feathers on the side of the head are short, like velvet, but on the top, descending towards the back of the head, they are the general length; on both sides of the head there is naked skin, which begins under the eyes, and extends to the back of the head, but without uniting; its breadth is uneven, near the eyes it is wide and yellow, but when the bird is pleased or is angry this colour varies. Black is the predominant colour of the body, with some tints of purple, violet, or green, according to the different light it is in; the feathers of the tail have a white streak.

Observations.—The minor grakle is found in both the Indies, in Jamaica, as well as in the islands beyond the Ganges, as far as Java. Their food is vegetable: those which are brought to Europe willingly eat cherries and raisins; if these be shown them without being given directly they begin to cry and weep like a child. They become exceedingly tame and confiding; they whistle exceedingly well, and chatter better than any parrot. The Chinese ladies are very fond of them; they are sold very dear in Java. In the inland parts of Germany nothing is so rare as one of these birds.



THE MACCAW.

LARGE BEAKED BIRDS.

The general characteristics of this group are, a beak large, but varying in size, very hollow, light, raised above, and hooked before; in the species immediately following, the legs are short, strong, and the feet formed for climbing; they are furnished with a tongue, thick, fleshy, and rounded like the human tongue, which renders articulation easy to them. All these birds are foreign, and ought to be reared from the nest when intended for speaking.

THE RED AND BLUE MACCAW.

Psittacus Macao, Linnæus; L'Ara Rouge, Buffon; Der rothe Aras, Bechstein.

The beauty of their plumage, and the facility with which they repeat words, are the two principal reasons for the introduction of parrots into parlours. Some imitate the songs of other birds and warble very sweetly. We have observed, that in order to speak distinctly the tongue must be thick, rounded, and the muscle loose enough to permit the requisite motion; hence it happens that parrots, above all those with a short tail, pronounce so very distinctly. The ravens, jackdaws, and jays come next to them; but the starlings and blackbirds surpass them in the formation of the larynx.

The red and blue maccaw is one of the largest of the parrot tribe, being two feet eight inches in length. The hardest stones of the peach cannot resist the strength of its beak, the upper mandible of which is very much hooked. The claws are directed forward, and two backward. The naked cheeks are covered with a wrinkled whitish skin. The head, neck, breast, belly, thighs, top of the back, and the upper wing-coverts are of the finest vermilion. The lower part of the back and the rump are light blue. The scapulars and large wing-coverts are a mixture of blue, yellow, and green.

The colours sometimes vary, especially in the wings and tail, but the species will not be the less easily known on that account.

The female very much resembles the male.

HABITATION.—When wild it inhabits South America, and may be found in Brazil and Guiana, in damp woods, and always in pairs. In the house it may be let range at will, giving it a roost with several rings placed across Like its fellows, it may be kept in a very large strong wire cage, high and wide enough to let it move with ease, and preserve its handsome tail in all its beauty.

FOOD.—In its native country the fruit of the palm tree is its principal food; our fruit it also likes, but white bread soaked in milk agrees with it better; biscuit does not hurt it; but meat, sweetmeats, and other niceties are very injurious; and though at first it does not appear to be injured, it becomes unhealthy, its feathers stand up separate, it pecks and tears them, above all those on the first joint of the pinion, and it even makes holes in different parts of its body. It drinks little—this is perhaps occasioned by its eating nothing dry. Many bird-fanciers say that the best food for parrots is simply the crumbs of white bread, well baked, without salt, soaked in water, and then slightly squeezed in the hand. But though this appears to agree with them pretty well, it is however certain that now and then something else ought to be added. I have observed, indeed, that parrots which are thus fed are very thin, have hardly strength to bear moulting, and sometimes even do not moult at all; in that case they become asthmatic, and die of consumption. It is clear that feeding them only on this food, which has very little if any moisture in it, is not sufficient to nourish them properly, at least during the moulting season, and while the feathers are growing again. I never saw a parrot in better health than one which belonged to a lady, who fed it on white bread soaked in boiled milk, having more milk than the bread would absorb, which the parrot drank with apparent pleasure; there was also put into the drawer of its cage some sea biscuit, or white bread soaked in boiling water; it was also given fruit when in season. It is necessary to be very careful that the milk is not sour

Some young maccaws are fed on hemp-seed, which must always be of the year before, as the new would be too warm and dangerous. Yet they must not be fed entirely on this food, but there must be added white bread soaked in milk or water, as has already been mentioned, some fruit and nuts, but never bitter almonds, as they will infallibly kill all young animals. In all cases the excrements of the bird will indicate the state of its health, and whether the food ought to be changed or not.

Although maccaws rarely want to drink, as their food is very moist, yet they must not be left without water, which is generally placed in one of the divisions of their tin drawer. It is also a good thing to entice them to bathe, nothing is more favourable to their health, or better facilitates the painful operation of moulting, or keeps their feathers in better order. A little attention to these favourites, deprived of their liberty, their natural climate, and food, cannot be too much trouble to amiable persons who are fond of them, and to whom these pretty birds become greatly attached.

Breeding.—The red and blue maccaws build their nests in the holes of old decayed trees; they enlarge and make the hole even with their beak, and line it with feathers. The female, like that of the other American parrots, breeds twice in the year, laying two eggs each time, which are exactly like those of the partridge. In Europe the females also lay well, but the eggs are generally unfruitful; when they are not so it is very difficult to make the mother sit; there are, however, a few examples of the female maccaw being so well inclined to perform this office, that she will sit on pigeons' and hens' eggs, which are hatched in due time.

The maccaws which we have in this country have generally been reared from the nest, particularly those which speak, for the old ones would be too savage and untractable, and would only stun one with their unbearable cries, the faithful interpreters of their different passions.

Diseases.—Amongst those to which maccaws are particularly subject, declines are the most frequent. Some cures for this are mentioned in the Introduction, which it would be well to employ. During the moulting season attention must be redoubled, not only to keep them in health but to preserve their beautiful plumage.

Attractive Qualities.—As maccaws are very dear they are generally only found in the possession of rich bird-fanciers. In the centre of Germany one costs from fifty to a hundred rix dollars, and in the maritime cities thirty or forty. Their beautiful plumage forms their principal attraction. They also learn to repeat many words, to go and come, and also to obey the least signal from their master. I confess, however, that their awkward walk, their heavy movements, and their constant inclination to help themselves along with their beak, added to their great uncleanliness, does not appear very agreeable. They are sometimes very wicked, taking dislike to some people, and may do great injury to children if left alone with them. Owing to their dung being very liquid, abundant, and fœtid, they must be cleaned regularly every day.

THE BLUE AND YELLOW MACCAW.

Psittacus Ararauna, LINNÆUS; L'Ara Bleu; Der Blaue Aras, BECHSTEIN.

THIS species, which is about the size of the former, appears to me much more beautiful, though the colours of its plumage are not so striking. Its beak is black, the feet dark grey; the cheeks flesh-coloured, streaked in the form of an S, with lines of short black feathers. The iris is light yellow; the throat ornamented with a black collar; the forehead, to the top of the head, the sides, and small wing-coverts are of a dark green; the rest of the upper part of the body is of a fine blue; all the colours are apt to vary.

HABITATION.—Being, like the preceding one, a native of Surinam, Guiana, and Brazil, its way of living and qualities are much the same. It does not, however, learn to speak so easily, and cannot pronounce the word *maccaw* so distinctly; but it imitates perfectly the bleating of sheep, the mewing of cats, and the barking of dogs. Its custom of only drinking in the evening seems extraordinary.

THE ILLINOIS PARROT.

Psittacus pertinax, LINNÆUS; La Perruche Illinoise; Der Illinesische Sittich, BECHSTEIN.

THIS is a species which almost all bird-sellers have. Its length is nine inches and a half. The beak is light grey, the eyes surrounded with a naked greyish skin, the iris is deep orange. The feet are dark grey. The principal colour on the top of the body is green, that under is yellowish grey. The forehead, cheeks, and throat are of a brilliant orange; the top of the head is dark green; this colour is lighter and yellowish on the back of the head; the top of the neck is greenish grey; there are some orange spots on the belly

In the female, the forehead only is deep yellow, and there is no other mixture of yellow either on the head or belly.

Habitation.—This parrot is also a native of the hottest parts of South America, frequenting savannas, or any other open places, and building its nest even in the holes of the Termites (*Termes fatalis*, Linnæus.) These birds are so sociable that they may be seen in flocks of five or six hundred.

In the house, they must always be kept in pairs, and generally in cages. They show the tenderness of their attachment to each other by their continual caresses; this is in fact so great, that if one die the other soon languishes from grief.

Food.—When these birds go forth to steal chestnuts, acorns, peas, and similar fruits, which form their food, they always place a sentinel to warn them of the approach of an enemy: at the least alarm, they fly away, uttering loud cries. When confined, they are fed with nuts, and bread soaked in boiled milk.

Attractive Qualities.—Their handsome plumage, their affectionate and confiding ways, and the tenderness of attachment which these pretty birds have for each other, make them great favourites; but they learn scarcely any thing, and their continual cries are sometimes very annoying.

THE LONG-TAILED GREEN PARRAKEET.

Psittacus rufirostris, Linnæus; Le Sincialo, Buffon; Der rothschnäblige Sittich, Bechstein.

The length of this species is twelve inches and a half, but the tail alone measures seven inches and a half. This bird is not larger than a blackbird; the folded wings only cover one quarter of the tail, the centre feathers of which are nearly five inches longer than the exterior ones. The upper mandible of the beak is of a blood red, with the point black; the under one is entirely black. The circle of the eyes, the naked membrane of the beak, and the feet, are flesh-coloured; the irides are orange. The rest of the body is yellowish green, with the wings bordered with light yellow. There are varieties of different shades of green, the tail feathers of which are blue at the extremity.

This species inhabits the hottest part of South America. Its cry is noisy and frequent; it soon learns to speak, whistle, and imitate the sounds of most animals as well as birds. In the cage, where it cannot have much other exercise, it chatters and squalls so incessantly, that it is often very disagreeable. It must be treated like the preceding species, but does not appear so delicate.

THE BLUE-HEADED PARROT.

Psittacus cyanocephalus, LINNÆUS; La Perruche à tête bleu, BUFFON; Der Blauköpfige Sittich, BECHSTEIN.

THIS beautiful species is not more scarce than the preceding, and is about the size of a turtle dove, although its length is eleven inches and a half, six of which being included in the tail, half of this is covered by the folded wings. The naked skin round the eyes is yellow; the upper part of the body is green, the under part yellowish. The forehead has some tints of red; the head is blue; the throat violet, with a grey tint.

This parrot comes from India, and is only prized for its beauty, for it cannot learn to speak. It must be treated like the preceding species.

THE YELLOW PARROT.

Psittacus solstitialis, LINNÆUS; La Perruche jaune, BUFFON; Der gelbe Sittich, BECHSTEIN.

THE whole length of this bird is eleven inches and a half. The tail is wedge-shaped, and the folded wings cover one-third of it. The beak and feet are green. The throat, the naked membranes of the beak, and the circle of the eyes, are light grey; the iris is yellow. The general colour of the body is orange, with olive spots on the back and wing coverts.

This parrot comes from Angola, and easily learns to speak. The food and treatment must be the same as the preceding.

THE AMBOINA PARROT.

Psittacus Amboinensis, LINNÆUS; Le Lory Perruche tricolor, BUFFON: Der Amboinische Sittich-Lory, BECHSTEIN.

THIS species somewhat resembles the Ceram lory, a variety of *Le Lori Noir* of Buffon (*Psittacus garrulus auroræ*, LINNÆUS); owing to this resemblance the French also call it *l'Aurore.* Its length is sixteen inches, of which the tail, which is round, measures half. The beak is nine lines in length; there is no naked membrane, and the nostrils are in front; the iris is of a golden hue. The head, the nape of the neck, and all the lower part of the body, are the colour of vermilion. A ring of sky blue, very indistinct, surrounds the neck; all the feathers on the top of the body are of a beautiful green, with a fine edge of blue, or some dark colour.

In the female, the head is green; the throat, the under part of the neck, and the breast, are the same, but having a reddish tint. The small tail-coverts are dark green, edged with red; the tail itself is tinged with green. The beak is horn brown, with a reddish tint above and below.

OBSERVATIONS.—A pair of this beautiful species were sold to his Highness the Duke of Meiningen as coming from Botany Bay, but they are really natives of Amboina. Timid and wild, this bird has a sharp whistle and a cry like "*gaick*," but cannot speak. The feathers are so loose that they generally come off in the hand when touched; but they grow again very quickly. It is kept and treated like the others.

THE PURPLE PARROT.

Psittacus Pennanti, LATHAM; La Purpure; Der Pennantsche Sittich, BECHSTEIN.

IN the male, which very much resembles the sparrow-hawk, the prevailing colour is a reddish purple, from which it derives its name among bird-sellers. The head and rump are dark crimson; the throat, as well as the small outer wing-coverts, and the centre pen-feathers, are of a most beautiful sky blue; all the under part of the body is bright crimson, shading to bluish on the thighs. The tail is of a deep blue.

In the female, which the bird-sellers pass as a different species, under the name of the *Palm-tree Parrot*, the prevailing colour is greenish yellow; it resembles the male sparrow-hawk in make. The head, the sides of the neck, and half the breast, are of a bright crimson; the throat pearl blue, shading a little to sky blue on the edges; the top of the neck, the back, shoulders, and last quill-feathers, are of a velvet black. All the feathers are edged with greenish yellow, except the scapulars and the feathers of the neck, the edges of which are the colour of sulphur. The rump and part round the vent are of parrot green, the long lower coverts of the tail crimson, edged with greenish yellow; the knee bands have a shade of sky blue. The under part of the body is of a brilliant yellow, with some irregular red dashes and spots, which show its relation to the former bird. The base of the tail is green, like the neck of the water-duck; the rest of the wings and tail are like the male.

Observations.—I have seen several of this superb species, which belonged to his Highness the Duke of Meiningen. It is a great pity that they are so wild, timid, and difficult to teach. Their note is a kind of chirping, which is rarely heard. Their feathers are as loose as the preceding species. They come from Botany Bay, and are very dear. Being more delicate, they require more attention than the other parroquets.

THE WHISKERED PARROT.

Psittacus bimaculatus, Sparrmann; Perruche à Moustache; Der Zweyfleckige Sittich, Bechstein.

The length of this very beautiful parrot is fourteen inches, of which the tail measures more than half; its size is that of the turtle-dove, but very slender. The beak is large, orange-coloured, or pale blood red; the head of a fine ash colour, tinted with green on the top, and having a narrow black band on the forehead; the part near the eyes is naked, and pale flesh-coloured; the forehead light yellow; an almost triangular spot extends from the base of the beak across the cheeks to the throat; all the top of the body is meadow green, spotted with black. The under part of the body is of a deep rose colour.

There is a variety of this species with a black beak.

In the female, or what is supposed to be so, the forehead, the throat, the sides of the head and neck are pale orange colour; an oval black streak descends from the corners of the beak towards the throat; the nape, the top of the neck, the shoulders, back, rump, and upper part of the tail, are meadow green. The breast and belly, to the extremity, are of a fine green.

Observations.—This bird is very docile, amiable, and talkative. Its mildness is very pleasing, and it is extremely affectionate and caressing. Its cry is "*gaie, gaie, gaie*." It comes from the Islands of the Southern Ocean and Botany Bay.

THE CARDINAL PARROT.

Psittacus erythrocephalus, LINNÆUS; La Perruche cardinale; Der Cardinal Sittich, BECHSTEIN.

THE length of this species is twelve inches, of which the tail, which is very wedge-shaped, measures six and three quarters. The beak is peach blossom, and the naked membrane ash coloured, the iris orange, and the feet grey. All the head is violet, tinted with blue and red; a black band surrounds the neck; the throat is black, the upper part of the body dark green, the under part light green.

In the female, the beak is yellow; the head of a dark blue ash-colour, without the ring round the neck; but the place of it is marked by a slight yellow tint. The young ones also have no ring, and the colour of the head is not marked; it varies from rose red to green.

VARIETIES OF THE CARDINAL PARROT.

1. The Blossom-headed Parrakeet, LATHAM; Psittacus erythrocephalus, LINNÆUS; Perruche à tête rouge de Gingi, BUFFON; Der Rothköpfige Sittich aus Gingi, BECHSTEIN.

THE head is red, having on the back a mixture of light blue. A narrow black line passes from the chin to the nape of the neck; another line, of light green, below the former, forms with it a ring round the neck. The rest of the plumage is green, but the under part of the body has a tint of light yellow. The tail is green above, having the inner border light yellow.

2. The Rose-headed Ring Parrakeet, LATHAM; Psittacus erythrocephalus Bengalensis, LINNÆUS; Petite Perruche à tête couleur de rose longs brins, BUFFON; Der Rothköpfige Sittich aus Bengalen, BECHSTEIN.

THE upper mandible is light yellow, the lower black, the membrane brownish. The top of the head and cheeks are rose coloured, the back of the head blue, the throat and ring like the preceding variety, as well as the red spot on the wing-coverts; the two centre feathers of the tail are blue, the others green, edged with blue.

3. The Borneo Parrakeet; Psittacus erythrocephalus Borneus, LINNÆUS Perruche à tête rouge de pêcher de Borneo; Der Rothköpfige Sittich aus Borneo, BECHSTEIN.

THE upper mandible is red, the under black, the membrane ash-coloured, the iris the same; the whole head is peach-blossom, with a green tint on the forehead; there is a black line between the eyes, near the membrane of the beak; another extends from the lower mandible obliquely on each side of the neck, widening on the back. The upper part of the body to the tail is light green, shading to light yellow towards the middle of the wing-coverts; all the under part from the chin is peach blossom, tinged with chestnut colour; the feathers of the thighs, the tail-coverts, and the middle of the belly, are green; the feathers of the tail are the same, but the centre ones are rather brown, and all are spotted with white.

OBSERVATIONS.—This parrakeet, so easily distinguished by its plumage, is lively, fearful, and its cry is frequent. It learns nothing of itself, and it is with great difficulty that it can be made to repeat a few words. I have seen it, with the preceding and following species, among the beautiful collection of birds belonging to his Highness the Duke of Meiningen.

THE RED-HEADED GUINEA PARRAKEET.

Psittacus Manillensis, BECHSTEIN; Perruche à collier couleur de rose, BUFFON; Der Manilische Sittich, BECHSTEIN.

THIS beautiful species, whose colours are soft and the feathers thick and silky, is hardly larger than the thrush, though its length is from fourteen to fifteen inches, two-thirds of which are included in the tail. The naked membrane is flesh-coloured, the eyelids very red. The plumage is, in general, light green. From the black throat there extends a ring round the neck, which is black at first, and afterwards pale rose colour; the back of the neck in old birds has a blue tint.

In the female the black of the throat is not so wide, there is no rose-coloured ring, and the under part of the body more nearly approaches yellow.

OBSERVATIONS.—This species, which is very mild, tame, and beautiful, is native of the Philippines, particularly Manilla; some say that it is also very common in Africa. It is very pleasing, certainly, but rarely learns to speak, and then only a few words. It must be treated like other delicate species.

THE PAVOUAN PARROT.

Psittacus Guianensis, Linnæus; La Perruche Pavouane, Buffon; Der Guianische Sittich, Bechstein.

This species is only twelve inches in length, including the tail, which measures six and a quarter, and has the two centre feathers three inches longer than the others. The upper part of the body is dark green, the under lighter. The cheeks are not spotted with bright red till the third year.

Observations.—It is a native of Guiana, Cayenne, and the Caribbee Islands. Bird-sellers in Germany are generally provided with them, as they are not delicate or difficult to carry about. They must be treated like the former species.

"This," says Buffon, "is, of all parrots from the new continent, the most easily taught to speak; nevertheless it is only tractable in this particular, for even after a long captivity it still preserves a native wildness and ferocity, and is sometimes stubborn and ill-humoured. But as it has a lively eye, is neatly and well formed, it is admired for its shape."

THE ROSE-RINGED PARRAKEET.

Psittacus pullarius, Linnæus; La Perruche à tête rouge, Buffon; Der Rothköpfige Guineische Sittich, Bechstein.

Bird-sellers give the name of *Guinea-sparrow* to this little parrakeet, which is not larger than the common crossbill. The beak is red, but pale at the tip, the membrane at the base ash colour, as well as the circle round the eyes. The feet are grey, the iris bluish; the front part of the head and throat are red; the edge of the wings and rump blue. The upper side of the tail feathers is red, the under has a black streak, the tip is green; the two centre feathers are entirely green, like the rest of the body.

In the female, the colours are the same, though lighter, and the lower part of the wing is yellow.

These birds may be found in any part of the torrid zone in the old world, from Guinea to India. As most of them died on the voyage, there were formerly very few of them in Europe, but as the means of preserving them is now better known. most bird-sellers have them. Though they cannot learn to speak, and their cry is rather disagreeable, yet one cannot help admiring them as much for their beauty as their great mildness. They are so much attached to each other that they must always be had in pairs, and if one dies the other rarely survives it. Some people think that a mirror hung in the cage, in which the survivor may imagine that it still sees its lost companion, will console it. The male remains affectionately near the female, feeds her, and gives her the most tender caresses; she, in her turn, shows the greatest uneasiness if she be separated from him for an instant. In the countries which this species inhabits, it makes great havoc among the corn. In Europe it is fed on canary seed, millet. and white bread soaked in boiled milk.

THE CAROLINA PARROT.

Psittacus Carolinensis, **LINNÆUS***; La Perruche à tête jaune, **BUFFON**, pl. enl. 499; Der Carolinische Sittich, **BECHSTEIN**.

THIS bird is about the size of a turtle-dove; its length is thirteen inches, of which the tail measures at least half. The beak is as white as ivory, the membrane and naked circle of the eyes, as well as the feet and claws, greyish white; the front of the head of a beautiful orange, the back, the nape of the neck, and the throat, light yellow; the rest of the neck, the back, breast, belly, and sides, are green; the tail is green, and very wedge-shaped.

OBSERVATIONS.—A native of Guiana; this pretty parrot also breeds in Carolina, and sometimes even penetrates into Virginia in large flocks during the fruit season, making great ravages among the nuts, of which it only eats almonds, rejecting all others. It is frequently brought to Europe; and in Paris it is the species of parrot which costs the most. It is fed, says Buffon, on hemp seed; but it is better to add white bread soaked in water, or boiled milk which is not sour, wheat, Indian corn, and the like. Its cry is frequent; it is rather wicked, and does not speak; but it well makes up for this by its beauty, the elegance of its form, its graceful movements, and its strong and almost exclusive attachment to its mistress; it likes to hang by the beak, even while sleeping, and will let itself be carried thus every where without moving for a very long time.

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* It appears that the *Psittacus Ludovicianus*, LINNÆUS, *Perruche à tête aurore* BUFFON is the same species.

THE LITTLE BLUE AND GREEN PARRAKEET.

Psittacus passerinus, Linnæus; La Perruche passerine été, ou Toui été, Buffon, Der Sperlingsparkit, Bechstein.

Its size very little exceeds that of the sparrow. A beautiful light green is the predominant colour of its plumage; but the rump is blue, the large wing-coverts are the same; the small ones, again, are green. The beak, the membrane at the base, the circle of the eyes, and the feet, are often orange; it sometimes varies, however, to yellow, ash colour, and flesh colour.

Observations.—This species is as social and affectionate as the preceding, but much more rare and dear. It is a native of Brazil, and cannot speak. It must be fed on canary seed, millet, and hemp.

THE GREY-BREASTED PARROT.

Psittacus murinus, Linnæus; La Perruche à poitrine grise, Buffon; Der grünbrustige Sittich, Bechstein.

This pretty parrot, distinguished by its silvery grey colour, is about the size of a turtle-dove. Its ruffling the feathers of its head, particularly on the cheeks, added to the smallness and peculiar way in which it holds its bill, which is always buried in its breast, gives it somewhat the appearance of a small screech owl. Its length is ten inches, of which the wedge-shaped tail measures half. The beak is three-quarters of an inch in length, pearl grey, or whitish. The forehead, to about the middle of the top of the head, the cheeks, throat, breast, and half the belly are of a light silvery grey, with shades appearing like grey stripes; the upper part of the body and tail are of a brilliant siskin green.

Observations.—This species is very mild, speaks but little, and even seems to be of a melancholy turn. Its call, which is "*keirshe*," is loud and sonorous. It is the same species which is mentioned in the Travels of Bougainville, by Pernetty. "We found it," says he, "at Montevideo, where our sailors bought several at two piastres a-piece. These birds were very tame and harmless; they soon learnt to speak, and became so fond of the men that they were never easy when away from them." The general opinion is, that they will not live more than a year and a half if kept in a cage; this prejudice is completely refuted by the bird from which this description is taken, and which may be seen in the collection of his Highness the Duke of Saxe Meiningen.

THE RED AND BLUE HEADED PARRAKEET.

Psittacus canicularis, **Linnæus**; La Perruche à front rouge, **Buffon**; Der rothstirnige Sittich, **Bechstein.**

This species, which is rather common among us, is ten inches in length, of which the tail measures half, of which the folded wings cover one third; the forehead is scarlet, the top of the head a fine sky blue, paler at the back; the upper part of the body meadow green, the under lighter.

The forehead is orange, and the circle of the eye pale yellow may be peculiar to the female.

Observations.—This parrot is handsome, but does not speak. Although a native of South America, is not very delicate or difficult to preserve. The food as usual.

THE RED-CRESCENTED PARAKEET.

Psittacus lunatus, **Bechstein**; Der Mondfleckige, **Bechstein.**

This species, which I have not found described by any author, may be seen in the collection belonging to his Highness the Duke of Saxe Meiningen. Its length is eleven inches and a half, of which the tail measures six. The beak, one inch in length. The forehead is deep red, a crescent of the same colour extends towards the upper part of the neck, ornamenting the top of the breast; the upper part of the body is leek green, becoming a little darker on the head. The under part of the body is light green, slightly tinted with red on the breast; the under part of the pen and tail feathers is dirty yellow.

Observations.—I do not know of what country this parrot is a native. It appears very lively, cries often and very loudly "*goeur, goeur*," speaks prettily and distinctly, and appears very healthy. The bird from which the discription is taken is certainly a proof that this species will attain a great age, for it is very old.

THE GREAT WHITE COCKATOO

Psittacus cristatus, LINNÆUS; Kakatoes à huppe blanche. BUFFON; Der gemeine Kakatu, BECHSTEIN.

THE size of this bird is that of a barn-door fowl, and its length seventeen inches. The beak is blackish, and the membrane at the base black; the iris is dark brown, the circle of the eye white. The whole of the plumage is white except the large quill-feathers and the exterior feathers of the tail, the inner beards of which are primrose-yellow to the centre. The tuft, which the bird raises and sinks at will, is five inches in length.

OBSERVATIONS.—At present, this species is only found in the Moluccas. The general custom in Germany is to give it a spacious cage in the form of a bell, from the top of which is hung a large metal ring, in which it likes to perch.

The food of the cockatoo is the same as that of the other large species of the same family; however, it appears to be very fond of vegetables, farinaceous grains, and pastry. For its qualities, I cannot do better than quote Buffon:

"Cockatoos," says he, "which may be known by their tuft, are not easily taught to speak; there is one species which does not speak at all; but this is in some measure compensated for by the great facility with which they are tamed; in some parts of India they are even so far domesticated that they will build their nests on the roofs of the houses: this facility of education is owing to their intelligence, which is very superior to that of other parrots. They listen, understand, and obey; but it is in vain that they make the same efforts to repeat what is said to them: they seem to wish to make up for it by other expressions of feeling and by affectionate caresses. There is a mildness and grace in all their movements, which greatly adds to their beauty. In March, 1775, there were two, a male and female, at the fair of St. Germain, in Paris, which obeyed with great docility the orders given them, either to spread out their tuft, or salute people with a bend of the head, or to touch different objects with their beak and tongue, or to reply to questions from their master with a mark of assent which clearly expressed a silent *yes:* they also showed by repeated signs the number of persons in the room, the hour of day, the colour of clothes, &c.; they kissed one another by touching their beaks, and even caressed each other; this showed a wish to pair, and the master affirms that they often do so even in our climates. Though the cockatoos, like other parrots, use their bill in ascending and descending, yet they have not their heavy disagreeable step; on the contrary, they are very active, and hop about very nimbly."

THE LESSER WHITE COCKATOO.

Psittacus sulphureus, LINNÆUS; Kakatoes à huppe jaune, BUFFON; Der gelbhäubige Kakatu, BECHSTEIN.

THE length of this species is fourteen inches and a half. The beak, the naked membrane, and feet are blackish; the circle of the eye is rather white, and the iris inclining to red. The general colour of this species is also white, with a primrose-yellow tint on the wings and tail, as well as a spot of the same colour under the eyes. The tuft, which is pointed, and composed of soft thread-like feathers, is of lemon-colour.

It comes from the same country as the preceding, to which it yields neither in elegance, intelligence, docility, nor mildness. It is fond of caresses, and returns them with pleasure: all its motions are equally full of grace, delicacy, and beauty. There are two varieties of this species, which only differ in size.

THE GREAT RED-CRESTED COCKATOO.

Psittacus Moluccensis, LINNÆUS; Kakatoes à huppe rouge, BUFFON; Der rothäubige Kakatu, BECHSTEIN.

THIS species is a little larger than the common cockatoo, its size being almost equal to that of the red and blue maccaw. Its beak is bluish black, the membrane black, the circle of the eyes pearl grey, and the iris deep red. The feet are lead colour, the nails black. White, tinged with pale rose-red, is the prevailing colour; the tuft, which falls back on the head, is very large, most of the feathers being six inches in length; of which the under side is of a beautiful orange. In the side tail feathers, from the base to the centre of the interior beard. the colour is primrose-yellow; the under part of the pen-feathers has a tint of the same.

OBSERVATIONS.—This beautiful bird has a noble air; and, though often tamed, it is rarely so caressing as the common cockatoo; its cry, like that of the other species, is its own name; it also cries "*tertingue*" very loud, and like a trumpet, and imitates the voice of several animals, particularly the cackling of fowls and the crowing of cocks. When it cries it flaps its wings.

Though a native of the Moluccas, it is neither delicate nor difficult to rear.

THE RED-VENTED COCKATOO.

Psittacus Philippinarum, **Linnæus**; Le petit Kakatoes des Philippines, **Buffon**; Der rothbäuchige Kakatu, **Bechstein.**

This species, the size of the grey parrot, is but thirteen inches in length. The beak is white, or of a pale flesh colour, and grey at the base; the circle of the eyes is yellowish-red; the feet are of a silver-grey; the general colour of the body is white; the head is ornamented with a tuft, in which there is nothing remarkable but its raising it in the form of a shell.

Observations.—It is a native of the Philippines. Its beauty and great docility are its chief merits; for it cannot speak, and it also appears of a jealous nature, being angry when it sees the other parrots caressed, and making the unpleasant cry of "*aiai, miai!*" but never "*cockatoo.*"

THE BANKSIAN COCKATOO.

Psittacus Banksii, **Linnæus**; Le Kakatoes Noir, **Buffon**; Der Banksche Kakatu, **Bechstein.**

This certainly is the handsomest, rarest, and most precious of all the cockatoos. It is as large as the red and blue maccaw, its length being from twenty-two to thirty inches. The beak is thick, yellowish, and black at the point; the iris red, and the feet black. Black is the prevailing colour of its plumage; the tuft is rather long, but in a state of tranquillity lies flat on the head, as in the preceding cockatoo; each feather has a yellowish spot exactly on the tip; the wing-coverts are also terminated with a similar spot.

Varieties.—Of this beautiful species there are several varieties.

1. Those with the beak lead-coloured; the tuft of a moderate size, black mixed with yellow feathers; the throat yellow; the sides of the neck spotted with yellow and black; the tail as above; all the rest black, without any streaks on the under part of the body.

2. Those with the beak bluish grey, plumage olive, or black, with a yellowish tint on the sides of the head, but having no

feather with a yellow tip. The belly of one colour, without streaks; tail as above. This may possibly be a young one.

3. Those with the beak raven-grey; the head, the neck, and the under part of the body of a dark dirty brown colour. The feathers on the top of the head and nape of the neck are bordered with olive: the upper part of the body, the wings and tail, of a brilliant black; the centre feathers of the latter are of one colour; the others scarlet in the middle, but without streaks. This is perhaps a female.

Observations.—This noble and handsome bird is still rather rare in England, and still more so in Germany. It may be found in many parts of New Holland; its motions resemble those of the common cockatoo and the manner of treating it is the same.

THE ASH-COLOURED PARROT.

Psittacus erithacus, Linnæus; Le Perroquet cendré, ou le Jaco, Buffon; Der Gemeiner aschgrauer Papagay, Bechstein.

This parrot and the following are the most common and docile that we possess. Its length is nine inches. The beak is black, the membrane at its base, and the circle of the eyes have a powdered appearance. The feet are ash-coloured, the iris yellowish. A fine pearl grey and slate-colour tinges the whole body; the feathers of the head, neck, and belly are edged with whitish grey; the tail, which is short, and of a vermilion colour, terminates and relieves this shining and watered plumage, which also has a powdered appearance. The male and female are alike, and learn with equal facility. Most of the birds of this species are brought from Guinea, but they also inhabit the interior parts of Africa, as well as Congo and the coasts of Angola.

Food.—In its native country it lives on all kinds of fruit and grain; it will also become quite fat on the seed of the safflower, which to man is so violent a purgative. Here it eats any of our food; but white bread soaked in boiled milk, and fruits, are what it likes best. Meat, of which it is very fond, brings on diarrhœa, as in other parrots, and that kind of green sickness which makes it peck itself and tear out its feathers, &c.

There are some instances, when treated with care, of their having lived for sixty years.

Breeding.—In its native country this species builds in high trees. This is the first of this group of birds which has bred in Europe. "M. de la Pigeonnière," says Buffon, "had a male and female parrot in the city of Marmanote, in Angenois, which used to breed regularly every spring for five or six years; the young ones of each brood were always reared by the parent birds. The female laid four eggs each time, three of which were fruitful, and the other not so. In order that they may breed at their ease, they must be placed in a room in which there is nothing but a barrel, open at one end, and partly filled with saw-dust; sticks must be placed inside and out of the barrel, that the male may ascend them whenever he likes, and remain near his companion. Before entering this room the precaution must be taken to put on boots, that the legs may be guarded from the attacks of the jealous parrot, which pecks at everything which approaches its female." The P. Labat also gives an account of two parrots which had "several broods in Paris."

Diseases.—This parrot becomes more subject to the different diseases in proportion as it is fed on choice food. Gout in the feet is the most general, and the specifics used for the bird are not more certain in their cure than those used for man. It is not difficult to prevent this evil by great cleanliness, and giving it no meat or other niceties.

Attractive Qualities.—This parrot, like the following, learns not only to speak and whistle, but also to make all kinds of gestures; and it even performs some tricks which require skill. It is particularly distinguished by its pleasing and caressing behaviour to its master. As an example of the talents of this species, Buffon gives an account of one which, "being instructed on its voyage by an old sailor, had acquired his harsh, hoarse voice so perfectly that it was often mistaken for him. Though it was afterwards given to a young person, and no longer heard the voice, it never forgot the lessons of its old master; and it was exceedingly amusing to hear it pass from a soft pleasing voice to its old hoarse sea tone. This bird not only has a great facility in imitating the voice of man, but it also seems to have a wish to do so, and this wish is shown in its great attention, the efforts which it makes to repeat the sounds it hears, and its constant repetition of them, for it incessantly repeats any words which it has just learnt, and endeavours to make its voice heard above every other. One is often surprised to hear it say words and make sounds, which no one had taught it, and to which it was not even suspected to have listened. It seemed to practise its lesson every day till night, beginning again on the next morning. It is while young that it shows this great facility in learning; its memory is then better, and the bird is altogether more intelligent and docile. This memory is sometimes very astonishing, as in a parrot which, as Rodiginus tells, a cardinal bought for one hundred crowns of gold, because it could repeat correctly the Apostles' Creed; and M. de la Borde tells us of another which served as chaplain to the vessel, reciting the prayer to the sailors, and afterwards repeating the rosary."

THE CERAM LORY.

Psittacus garrulus, LINNÆUS; Le Lori Noir variété dite de Ceram, BUFFON; De geschwätzige Lory, BECHSTEIN.

It is of the size of a pigeon, its length being from ten to eleven inches. The colours vary very much; but the following are the most common. Beak orange-coloured, naked membrane at its base, and the circle of the eyes grey; the iris deep yellow, and feet brown. The predominating colour of the body is bright red; but the small wing-coverts are a mixture of green and yellow.

It comes from the Moluccas, and is treated like the preceding, which it equals in docility.

THE BLUE-CAPPED LORY.

Psittacus domicella, LINNÆUS; Le Lory demoiselle, ou à collier, BUFFON; Der blauköpfige Lory, BECHSTEIN.

THIS magnificent species is of the size of a pigeon, and ten inches and a half in length. The beak is orange, the membrane blackish, as well as the circle of the eyes. The top of the head is purple black, or rather black shading to purple, on the nape of the neck; a crescent of light yellow, more or less visible, ornaments the under part of the throat. The outer edge of the quill-feathers, and the small wing-coverts, are of a deep blue, shading to sky blue; the others of a meadow green. The tail is slightly wedge-shaped, and of a bluish purple, tinged with red brown.

In the female, which is smaller, the crescent is either not visible or only faintly marked; the blue on the head is very slight; the border of the wing is a mixture of blue and green; this is all the blue which there is in the wings.

VARIETY.—The lower part of the back and belly, the rump, and the thighs are white and rose colour; the upper and under tail-coverts red and white; the wing-coverts green, with a mixture of light yellow; the beak light yellow; the rest as usual.

OBSERVATIONS.—This species has the same attractions as the other lories, and to judge from the specimen which I have seen among the collection of the Duke of Meiningen, it appeared to be the mildest, most endearing, and amiable; in short, the most docile and talkative of all the parrots. It cries *lory*, and chatters incessantly, but in a hollow voice, something like that of a man who speaks from his chest; it repeats everything whistled to it in a clear tone; it likes to be always caressed and paid attention to; its memory is very good.

This delicate species, being preserved with difficulty during the voyage, is also very rare and dear; it is a native of the Moluccas and of New Guinea; it requires to be taken great care of, to be kept warm, and to have its food changed when necessary.

THE BLACK-CAPPED LORY.

Psittacus Lory, Linnæus; Lory des Philippines, Buffon; Der schwarzkappige Lory, Bechstein.

This is about the size of the preceding. Its beak is orange; the membrane and circle of the eyes of a dark flesh colour; the iris orange. The feet are black; the top of the head the same, with a blue tint; the whole body is scarlet, except a blue spot between the back and neck, and another below the breast; both of these spots have a few red feathers; the wings are green above.

Observations.—The black-capped lory is still more scarce in Europe than the preceding, therefore it is dearer, but appears to possess all its good qualities.

THE WHITE-FRONTED PARROT.

Psittacus leucocephalus, Linnæus; Perroquet Amazone à tête blanche; Der weissköpfige Amazonenpapagey, Bechstein.

This is one of the most talkative parrots usually kept. Its beak is whitish, the circle of the eyes white; the iris nut brown; the feet are dark brown. The top, or rather the back of the head, is light blue in the male, and green in the female. The general colour is green, but the edge of the feathers is brown, particularly in the front part of the body. The red edge of the wing is the distinguishing characteristic of the male in Buffon's family of amazons.

This parrot is found in St. Domingo, Cuba, and even in Mexico. It is very mild and talkative, and imitates the cries of cats, dogs, and other animals to perfection.

It must be kept very clean, and not let suffer from cold.

THE BLUE-FACED PARROT.

Psittacus autumnalis, LINNÆUS; Le Crick à tête bleue, BUFFON; Der Herbstkrickpapagey, BECHSTEIN.

THIS is about the size of a pigeon. The beak is horn colour, with a long streak of orange on each side of the upper mandible; the whole circle of the head and the throat are blue; the top of the head and under part of the neck to the breast are red; the rest of the body is green, except the large quill-feathers, which are blue; some, however, are red, with a blue tip.

Varieties.—1. The head, instead of being red and blue, is red and white.

2. The forehead scarlet, the top of the head blue, an orange spot under the eyes, the upper border of the wings light yellow.

3. Forehead and throat red behind, and under the eyes blue, the top of the head greenish yellow, the lower border of the wings red, the end of the tail pale light yallow.

4. All the body blackish except the breast, the feathers of which are edged with dark brown and red.

OBSERVATIONS.—These birds inhabit Guinea, learn very little, and continually cry "*guirr, guirr.*"

COMMON AMAZON PARROT.

Psittacus æstivus, LINNÆUS; Der gemeine Amazonenpapagey, BECHSTEIN.

THIS species is imported in so great numbers that it is found at every bird-seller's, and is one of the cheapest. Its varieties are numerous. The following are the general colours: beak blackish; feet ash-coloured; iris golden yellow; forehead bluish, as well as the space between the eyes; head and throat yellow, but the throat-feathers are edged with a blue green; the body a brilliant green, inclining to yellowish on the back and belly.

This bird is common in the hottest parts of America, learns to speak, is very docile, sociable, and requires only common attention

THE YELLOW-HEADED AMAZON PARROT.

Psittacus nobilis, **Linnæus**; Psittacus ochrocephalus, **Gmelin**; Amazone à tête jaune, **Buffon**; Der gelbköpfige Amazonenpapagey, **Bechstein**.

The length of this species is fifteen inches, of which the tail measures five; the beak one inch, the sides of the upper mandible and base of the lower are red, the rest of the beak is raven grey; the iris golden yellow; the feet greyish flesh colour, and claws black. The top of the head is golden yellow, the forehead yellowish green; the colour of the body is green, dark above, and more yellow under; the tail is but slightly wedge-shaped; but Linnæus considered it sufficiently so to class it among the long wedge-shaped tails.

Observations.—This bird is very mild, and sometimes chatters and utters a few dull sounds, but at other times it speaks but little.

Its native country is South America: it is treated like the preceding.

THE YELLOW-BREASTED TUCAN.

Ramphastos Tucanus, **Linnæus**; Toucan à gorge jaune du Brésil, **Buffon**; Der Tukan oder Pfeffervogel, **Bechstein**.

Tucans are distinguished by the great size of their beak, which is convex above, hooked towards the point, hollow, light, and toothed on the edges like a saw. The feet have two claws before and two behind. In summer these birds are brought from South America to England and Holland, whence they are taken to Germany, though not often. They eat fruit, berries, grapes, bread, meat, and in general any of our food. In order to swallow anything they throw it into the air, catching it in their throats. They are generally reared from the nest, which is placed in the hole of a tree, and only contains two young ones, which in a short time are domesticated, and become very attractive.

Of the nine inches, which is the whole length of this tucan, the beak alone measures five, and is grey at the base and black at the point. The upper part of the body is of a green black;

the cheeks, throat, and front of the neck are orange, with a crimson band across the breast. The stomach is of a fine red, the belly and sides blackish, as well as the pen-feathers and tail. The upper tail-coverts are of a sulphur colour, the under ones are crimson; the feet and claws lead colour.

THE BRAZILIAN TUCAN.

Rhamphastos piscivorus, LINNÆUS; Le Toucan à gorge blanche du Brésil, BUFFON
Der Brasilishe Pfeffervogel, BECHSTEIN.

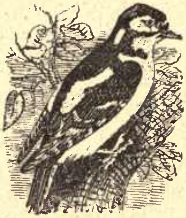
THIS species is twenty inches in length, of which the beak measures six; the upper mandible is yellowish green, with the edges orange coloured and toothed; the under mandible is of a fine blue, and the points of both are red. The iris is light brown; the circle of the eyes greenish yellow; the top of the head, the neck, back, belly, wings, and tail are black; the throat, the breast, and sides yellowish white; the part about the stomach is ornamented with a beautiful red crescent.

It is a native of Cayenne and Brazil.

THE PREACHER TUCAN.

Rhamphastos picatus, LINNÆUS; Le Toucan à ventre rouge; Der Prediger Pfeffervogel, BECHSTEIN.

THE whole length of the bird is twenty inches, of which the beak measures six; the point is red, and all the rest is yellowish-green. The prevailing colour is a brilliant black, with tints of green before, and grey ash colour on the back part of the body. The breast is of a fine orange; the belly, sides, thighs, lesser tail-coverts, and the tips of the feathers, are of a lively red. This Tucan inhabits Africa and Brazil; its long and incessant cry has given it the name of *Preacher*. It is as easy to tame as to feed, for it will eat any thing.



THE LESSER SPOTTED WOODPECKER.

WOODPECKERS.

THE birds in this group in general have the beak rectangular, in a few instances very slightly hooked, never thick nor very long.

THE GREEN WOODPECKER.

Picus viridis, LINNÆUS ; Le Pic vert, BUFFON ; Der Grünspecht, BECHSTEIN.

THE length of this bird is twelve inches and a half, but four and a half of these are included in the tail, almost half of which is covered by the folded wings. The beak, an inch and a half in length, is triangular, very pointed, and of a dark grey; the iris is grey; the tongue is five inches long, and furnished, like that of the other woodpeckers, with a horny tip, and strong hairs on each side, so as to be useful in catching and piercing insects. The top of the head to the nape of the neck is of a brilliant crimson; a black streak, which in old birds is often tinged with red, descends on each side of the neck; the upper part of the body is of a beautiful olive green, the under part of a dusky greenish white: some transverse lines may be seen on the belly, which become more distinct on the sides.

In the female the colours are paler, and there is less red on the head, which, when it is young, is only grey.

HABITATION.—When wild, the green woodpecker, during summer, frequents woods and orchards which are near these, but when the air becomes cold, and the snow begins to fall, it approaches villages, and flies from one garden to another; it passes the night in the holes of trees; when it finds dead, decayed, or worm-eaten ones, it pierces them on all sides with its strong beak, in order to find the insects they conceal. It never attacks a healthy tree, therefore it is not right to kill it as being mischievous; it only taps the bark of trees to make the insects come out, and its strokes are then so quick that they resemble a humming.

In the house its fierce and impetuous character makes it necessary to keep it in close confinement.

Food.—In its wild state it constantly seeks the insects which live under the bark and in the wood of trees; it also eats ants, and in winter will even take bees from the hive.

In the house it is fed on nuts, ants' eggs, and meat.

Breeding.—The female lays three or four perfectly white eggs in the hole of a tree: if the young are to be tamed they must be taken from the nest when only half fledged; it is impossible to tame adults or old ones; we cannot even make them eat.

Attractive Qualities.—The beauty of its plumage is all that can be said of it; for it is so fierce, quick, and stubborn, that it can only be kept by means of a chain. I know no instance in which every kind of attention has rendered it more docile and agreeable: it is always untractable. One or two of these chained birds, however, do not look bad as a variety. It is curious to see them crack the nuts.

THE GREATER SPOTTED WOODPECKER.

Picus major, Linnæus; L'Epeiche, ou Pic varié, Buffon; Der Grosser Buntspecht, Bechstein.

This bird is rather larger than a thrush, nine inches long of which the tail measures three and a half, and the beak one. The legs are three lines high, and of a bluish olive; the iris is bluish, with a white ring; the forehead yellowish brown; the top of the head and the back black; the nape of the neck crimson; the shoulders white, the wings and tail black, and streaked with yellowish white; the belly of a dirty reddish white, the part about the vent crimson.

The female has no red on the nape of the neck.

Habitation and Food.—This woodpecker continually ranges woods and orchards in search of its food, which consists of insects, beech-mast, acorns, nuts, and the seed of pines and firs. In order to crack the nuts, it fixes them in the clefts of the trees. The female builds its nest in the hole of a tree. and lays from four to six white eggs. Before moulting the head of the young ones is red. They must be taken early from the nest if they are to be tamed. They are fed and treated like the green woodpecker.

THE MIDDLE SPOTTED WOODPECKER.

Picus medius, Linnæus; Le Pic varié à tête rouge, Buffon; Der Mittlerer Buntspecht, Bechstein.

This is only distinguished from the former by being rather smaller: the beak is more slender, and very pointed. The top of the head is crimson, and the region of the vent rose-coloured. It is, besides, less common, and the young which are reared are not so untractable, though never very docile[*]. They are generally kept in a cage, and fastened by a little chain.

THE LESSER SPOTTED WOODPECKER.

Picus minor, Linnæus; Le Petit Epeiche, Buffon; Der Kleiner Buntspecht, Bechstein.

This bird is the size of a lark, five inches and a half in length, two of which are included in the tail, and the beak measures seven lines. The feet are of a greenish black; the rump is white; the top of the head crimson; the nape of the neck black; the back white, with transverse streaks of black; the under part of the body is of a reddish white grey, and the sides are streaked with black.

The female had no red on the head.

Habitation and Food.—This rare species inhabits forests of beech and oak, skilfully catching the insects under the bark and moss of these trees; it even flies to the ground to seek the same food among the grass. While rearing the young ones, they must be kept in a cage.

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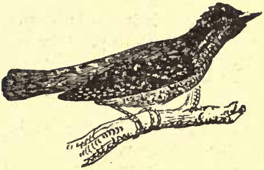
[*] I have, however, seen a woodpecker of this species which was reared by a lady, to whom it seemed very much attached. It had learnt of itself to go and return, knocking hard at the window if it was shut out. It was very amusing to see it climbing nimbly over its mistress till it had reached her mouth; it then asked her by light strokes of its beak for the food which she was accustomed to give it; this was generally a little meat. It disappeared one day, without any one's knowing what accident had befallen it.—Translator.

THE WRYNECK



Yunx torquilla, LINNÆUS; **Le Torcol**, BUFFON; **Der Gemeiner Wendehals**, BECHSTEIN.

THOUGH it is six inches and a half in length, it is not larger than our lark, because its tail includes three inches and a quarter, and its beak nine lines. The iris is of a brownish yellow, the feet, two claws of which are before and two behind, are short, strong, and lead colour. The head is ash-coloured, speckled with small rust-coloured spots mixed with some white ones. The top of the head and half of the back are divided lengthwise by a broad black streak, edged with rust colour; the rest of the upper part of the body is of a fine grey, streaked and speckled with black, white, and rust colour. In the female the belly is paler than in the male.

HABITATION.—When wild, it is a bird of passage, which departs during the first fortnight of September, and does not return till the end of April, frequenting groves and orchards. In August it goes into gardens and fields planted with cabbages and other vegetables.

In the house it is better to let it run about at will than to keep it in a cage, where it would soil its feathers, particularly those on the belly and breast, while playing.

FOOD.—In its wild state, the wryneck lives on insects, for catching which it has a very long cylindrical tongue, with a hard point, that can be insinuated into all the chinks and fissures of trees. Ants' eggs are a very favourite food, and it does not dislike the ants themselves. Towards autumn, when the latter fail, it is contented with elder-berries till the time of its departure which never varies.

In the house it must be first given ants' eggs; and then by degrees the universal paste, to which it soon becomes accustomed; but, as it is delicate, in order to preserve it for some time, the nightingales' food agrees better with it. It is very amusing to see it search all the cracks and crevices of the room for insects; and if a few ants' eggs were now and then put there, it would give it the greatest pleasure.

Breeding.—Its nest, which it places in the hole of a tree, is formed of moss, wool, hair, and straw. It lays eight eggs, which are white, and very smooth. The adults and old ones are difficult to preserve and tame; but the young ones may be easily reared on ants' eggs, and the universal paste, made of the crumb of white bread.

Mode of Taking.—In general it is caught by putting lime twigs round the nest; but if the weather be stormy, as in spring, when it is busy searching the bushes for insects, it may even be taken by the hand. The one I now have was brought to me by a little boy who had taken it in this manner.

Attractive Qualities.—Independently of its beautiful plumage, it is very amusing to see it make those movements which have given it its name of wryneck. It lengthens its neck, and turns round its head, so that the beak points down the back. Its general position is quite straight; the feathers of the head and throat very smooth, and the tail spread like a fan, at the same time bowing low. If it be irritated, or even if its food be brought, it slowly leans forward, raising the feathers on its head, lengthening and turning its neck, rolling its eyes; it then bows, spreads its tail, and murmurs some harsh sounds in its throat; in short, it puts itself in the most singular attitudes, and makes the most ridiculous grimaces. At other times it seems to have a melancholy disposition. In spring the male often cries in a full tone, *gui*, *gui*, *gui*, *gui*, to call its female.

M. de Schauroth informs me that two wrynecks which he reared became so tame, that they would hang about his clothes, and begin to warble as soon as they heard him, or saw him even at a distance. One day, being wearied and teazed with its incessant cries, he drove one out of the window; but having called it towards evening, it immediately replied to his voice, and permitted itself to be taken. One of these birds, which he let range about at will, having perched on a neighbouring tree, he had only to hold out and show it the box containing its food, and it returned immediately.

THE TOURAKO.

Cuculus Persa, Linnæus; Le Tourako, Buffon; Der Turako, Bechstein.

This Bird, which is about the size of a magpie, has been placed among the cuckoos by Linnæus, and those who have copied him. only because its cry is *couc*, *couc;* for in no other respect does it belong to this genus. Its beak is short and thick, and resembles that of the pigeon in shape; the upper is bent over the lower, and of a reddish brown; the nostrils are covered with feathers; the iris is nut-brown; the eyelids are edged with small red warts; the opening of the throat is wide, extending to the back of the ears; the nails of an ash grey; the head, throat, neck, top of the back, with the upper wing-coverts, the breast, upper part of the belly and sides, are covered with soft silky feathers, of a beautiful deep green; the feathers on the top of the head gradually lengthen into a large triangular tuft, which the bird raises at will. and the tip of which is red. The green in the tuft is sometimes mixed with white.

Observations.—The Tourako, which I have seen, belonging to his Highness the Duke of Saxe Meiningen, is one of the most elegant, mildest, and tamest of all foreign birds which I know. Its cry is *couc, couc, couc,* at first repeated slowly and distinctly, afterwards more quickly, and then in a rapid and continued succession. Notwithstanding the form of its feet it does not climb or hop, but runs as quickly as any partridge across the room, and often, pressing its wings against its body, makes several long leaps of ten feet.

Food.—The tongue is not perceptible on opening its beak, and it swallows every thing whole which is given it. It is fed on fruit and bread cut in small pieces; it has been remarked that it has a crop.

Buffon says, that one of these birds, which came from the Cape, ate rice; but that which I have seen would not touch it; on the contrary, it ate with avidity the stones of grapes, as well as bits of apple and orange; so that it may be concluded that fruit is its natural food. It is brought from Guinea, but may be found in other parts of Africa.

THE COMMON KINGFISHER.

Alcedo Ispida, **Linnæus**; L'Alcyon, ou Martin Pêcheur, **Buffon**; Der Eisvogel. **Bechstein.**

The length of this bird is seven inches, of which the short tail only measures one and a quarter, the legs are very short, being only four lines in height, and the outer claw is united to the centre one, as far as the first joint. The beak, an inch and a half in length, is strong, straight and pointed. The iris is dark brown; the top of the head and the wing-coverts are of a deep green; the one with transverse and the other with oval spots of a beautiful sky blue. The back and shoulders shine with the most beautiful blue. In the female the colours are darker, and the sky blue there is in them only meadow green.

Habitation.—When wild this is a solitary bird, which remains the whole year on the edges of ponds, streams, and rivers. During the winter it may be seen watching for its prey at the holes in the ice, placed on a stone or stick, or perched on the branch of a tree.

In the house it does not walk or hop, but flies or remains perched. It is very necessary to put some turf or branches in a corner, or it must be kept in a cage with a perch; it constantly remains in the same place.

Food.—In its wild state its food is small fish, leeches, and, indeed, all aquatic worms and insects. In the house it must be given as much as possible the same, accustoming it by degrees to eat meat. It is very rarely that those taken when old can be preserved. I have seen one, however, which ate even dead fish. The meat and small fish for its food must be put into a bowl of fresh water, large enough, or so firmly fixed, that it may not be easily overturned. When taking its food it does not hop to the bottom of the cage, but stretches itself downwards till it can reach the water with its beak, at least if it be not a young one reared in the house.—It will not eat while being looked at.

Mr. Paxton's method of management.—"Having become possessed," says Mr. Paxton, "of some young kingfishers last summer, we were very anxious to rear them; this we have accomplished, and, to the best of our information, it is the first time kingfishers were ever reared by hand. To accomplish this object we had a wire cage constructed about ten feet long, and four broad; the back part of the cage was made to imitate, as nearly as possible, the banks of a river;—through this cage a small stream of water was conducted, in which the birds received their food, &c. When the young birds were first taken from the nest, minnows and bullheads were their principal food; they have since been fed on almost every species of fresh-water fish, although they evince a marked preference for trout.

"Immediately on a quantity of small fish being put into the stream of water, they commence killing them, regardless of who may be near; and so surely do they strike, that, although we have repeatedly observed them, we never yet saw them miss their prey. As soon as they have caught a fish they kill it, by knocking its head against anything that may be near them. The quantity of fish consumed by each bird is almost incredible—we should think on the average not less than six ounces a day each; they could not exist twenty-four hours without food, so they quickly digest it. There can be no doubt that the sole reason of the kingfisher migrating to the sea-side on the approach of severe weather, arises from the voracity of its appetite.

"They are quite tame and domesticated, frequently sitting on the head or shoulder of the person who is in the habit of cleaning out their little dwelling. They are also very cleanly. We have observed them dive into the water as many as forty times incessantly, for the purpose of washing—this is generally done in the evening.

"Although they appear satisfied with their confinement, they are far from being friendly with each other; they fight with their wings, something after the manner of the swan; this is rather surprising, as they are very dexterous with their bills when seizing their prey.

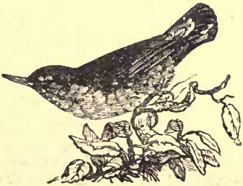
"We have tried to rear others in a common cage, feeding them partly on flesh, but never succeeded."

Breeding.—A hole at the edge of the water is the place in which it builds its nest, which is formed on the outside of small roots, and lined with feathers. Its eggs in general are eight in number, and quite white. In the young ones, before the feathers grow, the stubs are so long and straight that they might be taken for so many little bristles. As soon as the young can see clearly, and before the feathers begin to sprout, is the time to take them from the nest; they must be fed first on ants' eggs, meal worms, and other worms and afterwards accustomed by degrees to meat; they will be preserved in good health for a much longer time, if care be taken always to give them their food in fresh water, rather than let them pick it up from the ground.

Mode of taking.—When the place which one of these birds frequents most, and which is generally near an eddy in the water, is well known, a stake must be fixed to which the snare, called a springe, can be fastened; by this means the bird may be easily taken. Lime-twigs may also be put on a bush or stake near the water's edge, provided it does not hang so much over the water as to risk the bird's falling into it when fixed by the lime.

Attractive Qualities.—Its great attractions are its beauty, for it is not well proportioned, and all its motions are sudden.

THE NUTHATCH.



Sitta Europæa Linnæus; La Sittele, ou le Torchepot, Buffon; Der Nusshacker, Bechstein.

The length of this bird is six inches and a half, of which one and a half is included in the tail, and three-quarters in the beak, which is strong, straight, a little flat at the tip; the eyes are greyish brown; the feet yellowish grey, the claws very strong. The forehead is blue only in the male; the rest of the upper part of the body is of a blue grey; the cheeks and throat are white; a black streak passing across the eyes extends from the base of the beak to the neck; the belly and breast are of a dingy orange colour.

Habitation.—When wild it generally frequents woods. In the winter it approaches villages, and will even fly into barns and stables.

In the house it must be kept in a cage made entirely of wire, as wood cannot resist the strength of its beak [*].

Food.—In its wild state it lives on insects, which it seeks for in the trees, being able to cling to and run about the branches in any way : it also eats nuts and beech mast, which it skilfully fixes in the chinks of the trees, that it may crack them more easily.

In the house, it may be fed on hemp seed, oats, barley meal, or even bread. The way in which it crushes the hemp seed and oats is very curious; it takes as many as it can in its beak, and ranges them in order in the cracks of the floor, always taking care to put the large end lowest, that it may break them more easily; it then begins to despatch them one after another with the greatest skill and agility.

The lady who has been occasionally mentioned in the introduction, amused herself in the winter, and particularly when the snow was on the ground, with throwing, several times a day, different kinds of seeds on the terrace below the window, in order to feed the birds in the neighbourhood. These soon became accustomed to this distribution, and arrived in crowds when they heard the clapping of hands, which was the signal used to call them. She put some hemp seed and cracked nuts even on the window-sill, and on a board, particularly for her favourites, the blue tits. Two nuthatches came one day to have their snare in this repast, and were so well pleased that they became quite familiar, and did not even go away in the following spring, to get their natural food and to build their nest in the wood. They settled themselves in the hollow of an old tree near the house; as soon as the two young ones, which they reared here, were able to fly, they brought them to the hospitable window where they were to be nourished, and soon after disappeared entirely. It was very amusing to see these two new visiters hang or climb on the wall or blinds, whilst their benefactress put their food on the board. These pretty creatures, as well as the tits, knew her so well, that when she drove away the sparrows which came to steal what was not intended for them, they did not fly away also but seemed to know that what was done was only to protect and defend them.

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[*] A bird of this species, which had been accidentally winged by a sportsman, was kept in a small cage of plain oak wood and wire. During a night and a day that his confinement lasted, his tapping labour was incessant; and after occupying his prison for that short space, he left the wood-work pierced and worn like worm-eaten timber. His impatience at his situation was excessive; his efforts to escape were unremitted, and displayed much intelligence and cunning. He was fierce, fearlessly familiar, and voracious of the food placed before him. At the close of the second day he sunk under the combined effects of his vexation, assiduity, and voracity. His hammering was peculiarly laborious, for he did not peck as other birds do, but grasping hold with his immense feet, he turned upon them as a pivot, and struck with the whole weight of his body, thus assuming the appearance, with his entire form, of the head of a hammer, or, as birds may sometimes be seen to do on mechanical clocks, made to strike the hour by swinging on a wheel. The Rev. W. T. Bree, of Allesley, says, that having caught a nuthatch in the common brick trap used by boys, he was struck with the singular appearance of its bill, so unlike that of any bird he had ever seen. It was blunt at the end, and presented the appearance of having been truncated in an oblique direction, as if the natural beak had been cut off. He naturally inferred that it had been fairly ground down to about two-thirds of its original length, by the bird's pecking at the bricks, in its efforts to escape from the trap.—Translator.

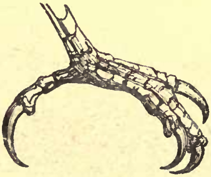
These nuthatches remained near the house for the whole summer, rarely wandering, till one fatal day, at the beginning of the sporting season, in autumn, they no sooner heard the report of a gun than they disappeared, and were never again seen. It is possible that fear alone had driven them so far that they could not find their way home again; they did not know that there they would have been in greater safety.

If these birds are left at liberty in the room, they are accustomed, like the tits, to hide the greater part of what is given to them, to keep it for another meal; but their trick of piercing holes in the wood makes them inconvenient, and therefore it is better to keep them in a cage.

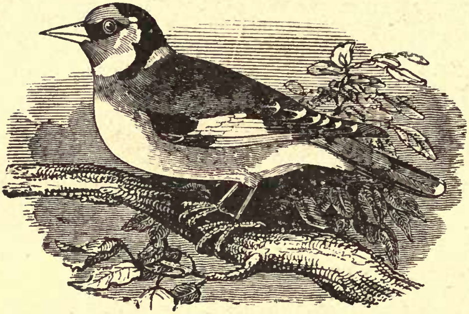
Breeding.—The nuthatch builds its nest in the holes of old trees, and lays six or seven eggs spotted with red.

Mode of Taking.—As it has the same taste for hemp seed and oats as the tits, it may often be caught in the same snare; it may also be taken in the area or barn floor trap. Its call is "*gru, dek, dek.*"

Attractive Qualities.—Its plumage, liveliness, agility, and great cunning in catching and hiding its food, are its most agreeable qualities.



NUTHATCH CLAW.



GOLDFINCH.

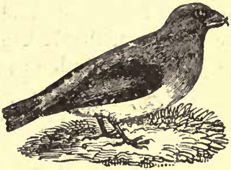
PASSERINE BIRDS.

The birds of this group have the beak conical and pointed, in general rather strong, with both the mandibles moveable, and fit for peeling and cleaning grain. Their feet are slender, and their claws divided. Some of them do not confine themselves to grain, but also eat insects. Those which feed solely on seeds disgorge them into the crop of their young, the others simply put the food into their beaks. The greater part of them build their nests very skilfully. The females brood alone, or are very rarely assisted by the males in hatching.

This group and the following are peculiarly the real *cage birds;* those pretty and attractive little creatures which enliven our rooms with their songs.

Those which feed only on seeds may be tamed at any age.

THE CROSSBILL.



Loxia curvirostra, LINNÆUS; Le Beccroisé, BUFFON; Der Kreuzschnabel, BECHSTEIN.

THE length of this bird is nearly seven inches, of which the tail measures two and a quarter. The beak, which is one inch in length, and very thick, has its two mandibles curving in opposite directions, and crossing each other at the points, whence the name. It is no fixed rule for the upper mandible to cross to the right or left, but its direction appears to be acquired when young. The shanks, which are eight lines high, and the beak, are brown; the iris is nut-coloured.

The change of colour, which some assert this bird is subject to three times a year, simply occurs as follows:—

The young male, which is at first of a greyish brown, with a little yellow, becomes after moulting entirely red, darker on the upper part of the body than on the lower, the quill and tail feathers excepted, which are blackish. This generally happens in April or May. At the second moulting this red colour becomes a greenish yellow, which is permanent; so that when red they may be known to be the young male birds, and when yellow the old ones.

The females are in general grey, with a little green on the head, breast, and rump, or irregularly speckled with those two colours.

From observations which have been made with great care and exactness, and which any one can repeat who wishes, it appears proved that an old male bird never changes its colour. In order to be exact as to these facts, it is necessary to observe the bird from the time of its leaving the nest; for, if one were to judge from those taken in a snare, one would certainly be disposed to think that not one bird resembled another: but all this variety depends on the different stages in moulting, which so very much affects the colours of the plumage.

Thus, in old male birds the forehead, cheeks, and eyebrows are spotted with grey, greenish yellow, and white. Wherever green and yellow are prevalent, the dark grey shows through, and has the appearance of spots on those parts, particularly on the back, for the tips alone are green and yellow.

The result of all this is, that when grey or speckled crossbills are spoken of, they are the young ones; when red, they have passed their first moulting; when crimson, they are near their second; and when spotted, red and yellow, they are two years old, and in full feather. To judge with exactness, these birds ought to be seen at the time of laying, but neither this nor the moulting has any fixed season; and this circumstance sufficiently explains the great variety and difference of colour which are found among this species.

These details also show that the crossbill is subject to nearly the same changes of colour as the linnet, and that the red colour which it bears for the first year is what peculiarly distinguishes it from other birds. One thing, which is rather remarkable, is, that the young ones reared in the house never take the red colour, but remain grey for the second year, or change directly into greenish yellow.

There are two kinds of crossbills, the greater and lesser; but the difference is not so great as some pretend, and nature is not more invariable in the size of birds than it is in that of men *.

Habitation.—When wild, the crossbill not only inhabits Europe, but also all the north of Asia and America, everywhere frequenting forests of pines and firs, where these trees, which are loaded with cones, furnish abundance of food.

In the house it may be let range at will, but a branch of fir, or any other tree, must be put near it, on which it can perch or sleep. If it be kept in a cage it must be made of wire; for, being so much disposed to peck and nibble, a wicker cage would soon be reduced to chips.

Food.—In its wild state the pine seed is its favourite food; the shape of its beak is peculiarly adapted for procuring these seeds, by separating the scales of the cones; it also gathers from the ground those which have fallen, and it does not neglect those of the fir, and even of the alder. When these fail it is contented with the buds of the same trees.

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* The parrot crossbill is a very different species, but is rare.—Translator.

In the house, if it be let run about at liberty, the second universal paste will be sufficient; but if kept in a cage it must be fed on hemp, pine, and rape seed, and even elder-berries.

Breeding.—The time of breeding is very remarkable, being generally in the depth of winter, from December to April. The nest, which is placed at the top of a pine or fir tree, is first formed of very fine small twigs, there is then a layer of coarse moss, but the interior is lined with the finest and softest moss; it is not glued with resin, as some have said. The young crossbills being in Thuringia the object of many ridiculous superstitions, the wood-cutters are always careful of the nests. The number of the eggs varies from three to five, they are of a greyish white, spotted, speckled, and streaked at the large end with red brown. The heating nature of their food enables the young and old birds to bear the severity of the season. The old birds feed their young with the food disgorged from their own stomach, as do all the grosbeaks. This species may be reared in the house on white bread soaked in milk, and mixed with a few poppy-seeds.

Diseases.—The accumulated vapour from a room with a stove has such an effect on the constitution of these birds, that they are almost always ill *. Weak eyes, swelled and ulcerated feet, are very common occurrences; hence the mountaineers of Thuringia have taken it into their heads that these poor birds can take upon themselves their diseases and pains: and it is this foolish idea that induces them always to keep one of these birds near them. Their superstitious extravagance carries them so far, that they are persuaded a bird whose upper mandible bends to the right, has the power of assuming to itself the colds and rheumatism from men; but when this mandible turns to the left, the bird renders the same service to the women. These simple and credulous people imagine that nothing is more efficacious against epilepsy, than every day to drink the water which the bird has left, because they see that these unfortunate victims are often attacked with this disease.

Mode of Taking.—With the decoy birds nothing is easier than to take the crossbills in the autumn and spring: one large rod, covered with strong birdlime, is all that is necessary. It must be put in a glade in the wood which these birds frequent, with the decoy bird by the side; this, by its continual cry, will soon attract them. In Thuringia the people put nooses and spring traps on the top of some of the highest pines, and there hang the cage of the decoy bird; as soon as one crossbill has settled, the others follow; so that as many birds are taken as there are traps set, particularly if the stick of the spring traps be placed so that the bird must perch on it.

Attractive Qualities.—The crossbill is rather a silly bird; in the cage its motions are like those of the parrot; when lively it swings its body like the siskin, and sings a few sharp strains, which are more or less monotonous, according to the different powers of the songsters—for some of the males far surpass the others in this short melody. It is easily tamed, can be carried about anywhere on the finger, and will go and return again without wandering.

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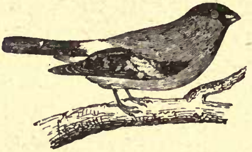
* The too great heat has doubtless also something to do with it.—Translator.

THE BULLFINCH.



Loxia pyrrhula, LINNÆUS; Le Bouvreuil, BUFFON; Der Gimpel, BECHSTEIN

THIS is one of the indigenous tame birds which is a favourite with the rich and noble. Its body is thick and short. Its whole length is six inches and three quarters, of which the tail measures two and three quarters; the beak is only six lines in length, short, thick, and black; the iris is chestnut-coloured; the shanks eight lines high, and black; the top of the head, the circle of the beak, the chin, and beginning of the throat, are of a beautiful velvet black; the upper part of the neck, the back, and shoulders, deep grey; the rump white; the under part of the neck, the wide breast, and to the centre of the belly, are of a fine vermilion, less bright, however, in the young than old; the blackish pen-feathers become darker towards the body; the secondaries have the outer edge of an iron blue, which in the hinder ones is reddish. The tail is rather forked, and of a brilliant black, tinged with iron blue.

The female is easily distinguished from the male, for what is red on him is reddish grey on her, while her back is of a brownish grey, and her feet are not so black; she is also smaller.

This species has some singular varieties; the principal are:—

1. The *White Bullfinch*, which is of an ashy white, or wholly white, with dark spots on the back.

2. The *Black Bullfinch*. These are most generally females, which become black, either with age, when they are only fed on hemp seed, or with having been kept when young in a totally dark place. Some resume at their moulting their natural colours; others remain black; but this black is not the same in all; some are of a brilliant raven black. others

dull, and not so dark on the belly; in some the head only is of a raven black, the rest of the body being duller; in others the black is mixed with red spots on the belly, or the latter is entirely red. I have seen one in which the head and breast, as well as the upper and under parts of the body, were of a raven black, every other part of a dull black, with the wings and tail white; it was a very handsome bird, rather larger than a redbreast.

3. The *Speckled Bullfinch.* It is thus called, for, besides its natural colours, it is spotted with black and white, or white and ash colour.

4. The *Mongrel Bullfinch.* It is the offspring of a female reared in the house from the nest, and of a male canary. Its shape and colour partake of those of the parent birds; its note is very agreeable, and softer than that of the canary; but it is very scarce. This union rarely succeeds; but when tried, a very ardent and spirited canary should be chosen *.

5. The other varieties are: the *Large Bullfinch*, about the size of a thrush, and the *Middling*, or *Common.* As to dwarf birds, which are not as large as a chaffinch, it is a bird-catcher's story, for this difference in size is observed in all kinds of birds. I can affirm it with the more certainty, having had opportunities every year of seeing hundreds of these birds, both wild and tame. I have even in the same nest found some as small as redbreasts, and others as large as a crossbill.

Habitation.—When wild, bullfinches are found over Europe and Russia. They are particularly common in the mountainous forests of Germany. The male and female never separate during the whole year. In winter they wander about everywhere in search of buds.

In the house those which are caught in a snare are often let run about These birds not being very unruly or very active, a middling-sized cage will do, in which those which have learned songs are kept; but they must be kept in separate rooms, as they will mutually spoil their songs if left together.

Food.—When wild the bullfinch does not often suffer from the failure of its food; for it eats pine and fir seeds, the fruit of the ash and maple, corn, all kinds of berries, the buds of the oak, beech, and pear trees, and even linseed, millet, rape, and nettle seed.

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* However difficult this pairing may be, it sometimes succeeds very well. A bullfinch and female canary once produced five young ones, which died on a journey which they could not bear. Their large beak, and the blackish down with which they were covered, showed that they were more like their father than mother.—Translator.

In the house those which run about may be fed on the universal paste, and, for a change, rape seed may be added ; those which are taught must be fed only on poppy seed, with a little hemp seed, and now and then a little biscuit without spice. It has been remarked that those which are fed entirely on rape seed soaked in water live much longer, and are more healthy. The hemp seed is too heating, sooner or later blinds them, and always brings on a decline. A little green food, such as lettuce, endive, chickweed, water-cresses, a little apple, particularly the kernels, the berries of the service tree, and the like, is agreeable and salutary to them.

Breeding.—These tenderly affectionate birds can hardly live when separated from one another. They incessantly repeat their call with a languishing note, and continually caress. They can sometimes be made to breed in the house, like the canary, but their eggs are rarely fruitful. In the wild state they breed twice every year, each time laying from three to six eggs, of a bluish white, spotted with violet and brown at the large end. Their nest, which they build in the most retired part of a wood, or in a solitary quickset hedge, is constructed with little skill, of twigs which are covered with moss. The young ones are hatched in fifteen days. Those which are to be taught must be taken from the nest when the feathers of the tail begin to grow ; and must be fed only on rape seed soaked in water and mixed with white bread ; eggs would kill them or make them blind. Their plumage is then of a dark ash-colour, with the wings and tail blackish brown ; the males may be known at first by their reddish breast ; so that when these only are wished to be reared they may be chosen in the nest, for the females are not so beautiful, nor so easily taught.

Although they do not warble before they can feed themselves, one need not wait for this to begin their instruction *, for it will succeed better, if one may say so, when infused with their food ; since experience proves that they learn those airs more quickly, and remember them better, which they have been taught just after eating. It has been observed several times, that these birds, like the parrots, are never more attentive than during digestion. Nine months of regular and continued instruction are necessary before the bird acquires what amateurs call firmness, for if one ceases before this time, they spoil the air, by suppressing or displacing the different parts, and they often forget it entirely at their first moulting. In general it is a good thing to separate them from the other birds, even after they are perfect ; because, owing to their great quickness in learning, they would spoil the air entirely by introducing wrong passages ; they must be helped to continue the song when they stop, and the lesson must always be repeated whilst they are moulting, otherwise they will become mere chatterers, which would be doubly vexatious after having had much trouble in teaching them.

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* I do not recommend the employment of bird organs for instructing birds, because they are rarely accurate, and their notes are harsh and discordant ; for bullfinches repeat the sounds exactly as they hear them, whether harsh or false, according to the instrument used. The good and pure whistling of a man of taste is far preferable ; the bird repeats it in a soft, flute-like tone. When one cannot whistle well it is better to use a flageolet.—Translator.

Diseases.—Those bullfinches which are caught in a snare or net are rarely ill, and may be preserved for eight years or more; but those reared from the nest are subject to many diseases, caused by their not having their natural food, or by those injurious delicacies which are always lavished on favourite birds; they rarely live more than six years. The surest means of preserving them healthy for a long time, is to give them neither sweets nor tit-bits of any kind, scrupulously to confine their food to rape seed, adding now and then a very little hemp seed to please them, and a good deal of the green food before mentioned. The bottom of their cages should be covered with river sand, as the bird there finds some stones which aid the functions of the stomach. Their most frequent diseases are moulting, costiveness, diarrhœa, epilepsy, grief, and melancholy, in which case they are quite silent, and remain immoveable, unless the cause can be discovered. They must not be given any delicacy, and must be fed entirely on soaked rape seed. A clove in their water, proper food, and particularly a good deal of refreshing green food, enables them to pass the moulting time in good health.

Mode of Taking.—There are few birds so easily attracted by the decoy bird as bullfinches. They may also be taken by any of the usual means. In winter numbers may be caught by a noose, by hanging to it such berries as the bird likes; in spring and autumn they may be caught in the area or barn floor trap; and provided they see berries there, the decoy bird is not wanted; it is sufficient if one imitates their soft cry of "*tui, tui*," in the hut.

Attractive Qualities.—Although the song of the male and female bullfinch, in their wild state, is very harsh and disagreeable, yet if well taught while young, as they are in Hesse and Fulda, where there are schools of these little musicians, for all Germany, Holland, and England, they learn to whistle all kinds of airs and melodies with so soft and flute-like a tone, that they are great favourites with amateurs, and particularly with the ladies. There are some of these little birds which can whistle distinctly three different airs, without spoiling or confusing them in the least. Added to this attraction the bullfinch becomes exceedingly tame, sings whenever it is told to do so, and is susceptible of a most tender and lasting attachment, which it shows by its endearing actions; it balances its body, moves its tail from right to left, and spreads it like a fan. It will even repeat words, with an accent and tone which indicates sensibility, if one could believe that it understood them; but its memory must not be overloaded. A single air, with a prelude or a short flourish to begin with, is as much as the bird can learn and remember, and this it will execute to the greatest perfection. These little prodigies would be more interesting and agreeable, if their Hessian instructors possessed a little musical taste, but these are generally tradespeople, employed about the house with their different occupations and trades; and hymns, airs, and minuets of a hundred years old, public house songs, or some learnt of their apprentices, in general compose the whole of their music.

The bullfinch can also imitate the songs of other birds; but in general it is not permitted to do so, that it may only learn to repeat the airs which are taught it.

Different degrees of capacity are shown here, as well as in other animals. One young bullfinch learns with ease and quickness, another with difficulty and slowly; the former will repeat, without hesitation, several parts of a song; the latter will be hardly able to whistle one, after nine months' uninterrupted teaching. But it has been remarked that those birds which learn with most difficulty remember the songs, which have once been well learnt, better and longer, and rarely forget them, even when moulting. Mr. Thiem *, bird-seller, at Waltershausen, near Gotha, sends annually to Berlin and London one or two hundred bullfinches, instructed in this manner, at from one to several pounds sterling a-piece, according as they are more or less accomplished, whilst a wild one would cost only two or three pence. These, however, are also kept in the room and prized, both on account of their beauty and the great ease with which they are tamed; they soon learn to fly on the hand, to receive their food, or will even take it from the mouth, and become at last as familiar as if they had been reared from the nest. The following are the means which are employed to tame them:—As soon as a bullfinch is caught and brought into the room, it must be put into a cage with food sufficient for the first day only; for the loss of its liberty does not prevent its eating as soon as it is disengaged from the lime twigs or noose. The next day a band must be put round the body and wings, like that which bird-catchers put round a decoy bird, which they let run about out of doors; by means of this band the bullfinch may be fastened by a piece of packthread, a foot in length, to some place from which it cannot fall; this will prevent its beating itself to death with its wings; a little bell may be fastened to a box, which when filled with food must be given to the bird, at the same time ringing the bell; it must be then left that it may eat; this must be repeated several times in the day; the same must be done when it is given anything to drink. The poor little captive will not at first either eat or drink in any one's presence; it is therefore necessary to retire for the two first days after having given it the box, and only approach it by degrees, till it is accustomed to eat in the presence of its master, which it will soon be, for generally on the third day, as soon as it hears the bell and sees the box, it hops forward, and eats without the least shyness. Then the distance must be increased by degrees to make it come farther and farther, when, as soon as it has eaten, it may be taken on the hand and carried here and there, though it may seem a little frightened, but not being able to escape it will soon become used to this treatment, and will even begin to come to eat on the hand by continuing to do this for the third and fourth days; it will fly of itself at the sound of the bell to the hand which holds the box; after this the fastening may be loosened, and if one only move from the bird gradually, it will fearlessly approach and perch on the hand. Should it escape, however, it must be again confined and left without food for some hours. By this

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* Mr. Thiem, son of the Mr. Thiem in the text, arrives annually in London in April or May, with birds for sale.—TRANSLATOR.

means a wild bullfinch will in eight days become accustomed to fly immediately to the hand, or wherever it hears the bell; in order to finish its education, it is well to increase the difficulty of getting at its food, by putting it in a small bag with a very little opening; it must also only have rape seed in the cage, keeping the hemp seed, which it likes best, for the hand or little bag. It may be taught to drink out of one's mouth by keeping it without water for five or six hours. It may even be accustomed to go and return, provided the house is not too near a wood. The surest means of preventing too long an absence is to put a female bullfinch in a cage in the window, or to leave her in the room with her wing clipped; its affection will soon bring it back to her, and it will certainly never abandon her altogether.

Tame bullfinches have been known (says Buffon) to escape from the aviary, and live at liberty in the woods for a whole year, and then to recollect the voice of the person who had reared them, return to her, never more to leave her. Others have been known, which when forced to leave their first master, have died of grief. These birds remember very well, and often too well, any one who has injured them. One of them having been thrown down, with its cage, by some of the lowest order of people, did not seem at first much disturbed by it, but afterwards it would fall into convulsions as soon as it saw any shabbily dressed person, and it died in one of these fits eight months after the first accident.

A bullfinch, belonging to a lady often mentioned before, being subject to very frightful dreams, which made it fall from its perch, and beat itself in the cage, no sooner heard the affectionate voice of its mistress than, notwithstanding the darkness of the night, it became immediately tranquil, and re-ascended its perch to sleep again. It was very fond of chickweed, and as soon as it perceived one bringing it to him, however much care was taken to prevent its finding it easily, it would show its joy by its actions and cries.

THE GREEN BIRD.

Loxia chloris, LINNÆUS; Le Verdier, BUFFON; Der Grünling, BECHSTEIN.

THIS bird is rather larger than the chaffinch, being six inches in length, of which the tail measures two and a half; the beak five lines in length. The iris is dark brown; the shanks are eight inches in height, and of a bluish flesh colour. The prevailing colour of the plumage is yellowish green, lighter on the lower part of the body, still more so on the rump and breast, and shading to white on the belly.

The female, which is smaller, is still more distinguished by the greenish brown of the upper part, and the ash-colour rather than yellowish green of the lower part of the body; she has besides some yellow spots on the breast, and the whole belly is rather white than yellow.

Sportsmen and bird-catchers mention three kinds of green birds, namely, the large, which is everywhere of a beautiful yellow; the middle sized, the under part of the body of which is light yellow; and the little, which they say is rather greenish than yellow; but all this variety depends upon the different ages of the bird, as well as its strength, and more or less beautiful tints of its plumage. What much more deserves to be remarked is the mule, which is the offspring of a green bird, and a female canary; it has a strong body; its colours are green and grey, mixed with yellow, when the female canary is yellow · but it is always a bad singer.

Habitation.—When wild, the green bird may be found over all Europe, though not often far north. It may be seen during summer, in hedges, and on the borders of woods, and always where there are several trees near together; during winter it wanders into different provinces, in large and numerous flocks; but in March it begins to return from these journeys.

In the house it may either be let range free, or be shut up in an aviary with other birds, where it is always very peaceable as long as it has sufficient food; but when that fails, it perches itself on the general food-drawer, and keeps it determinedly, pecking it with its beak so cleverly that no other bird can approach: should one venture, it is soon obliged to go away or lose its feathers; otherwise this bird is as quiet and tame in the house as it is wild and active when at liberty.

Food.—In its wild state it seems to like all kinds of seed, even that of the milk thistle, which all other birds dislike.

In the house, when it ranges at will, the second universal paste so well agrees with it that it becomes quite fat; however, as a variety, rape and hemp seed may be thrown to it; if in a cage it must only be fed in summer with rape seed, except a little hemp seed, which may be given after moulting, to make it sing. Lettuce, chickweed and other green food, always agree with it, and even the berries of the juniper tree.

Breeding.—Its nest, which is almost always placed in a hedge, on a large branch near the trunk of a tree, or on the top of an old willow-tree, is firmly built with wool, moss, and lichen, and lined with very fine roots and bristles. The female lays, twice a year, four or five pointed eggs, of a silver hue, spotted with light violet or brown. The young are at first of a greenish grey; some yellow tints, however, may already be seen in the male. When reared from the nest, it learns, though with difficulty, to imitate the different songs of house-birds; and, as it almost always happens with slow memories, having once learnt a thing it never forgets it. It also sings through the whole year; it should therefore be taught by a bird whose song is agreeable, for instance, a chaffinch, and then one would have the pleasure of hearing it without interruption through all the seasons.

Diseases.—The constitution of the green bird being very strong and healthy, it is rarely subject to disease. It may be kept in good health for twelve years.

Mode of Taking.—If the decoy bird be a good one, the green bird may be easily caught in the area or barnfloor trap, even in December. In the spring it may be taken with bird-lime on the lure-bush, when a linnet will do for the songstress. In order to make it eat soon, a little crushed hemp seed should be thrown in the bottom of its cage.

Attractive Qualities.—Without being handsome its song is not disagreeable; it may also be taught to repeat words; but its greatest merit is the wonderful ease with which it is tamed, equalling, and even surpassing the bullfinch in this particular. It may not only be accustomed to go and return again, but also to build in a room near an orchard, or in a summer-house in the garden. The following are the means which must be taken to make it do this .—

After having taken the young from the nest they must be put in a cage, and placed at the foot of the tree in which this nest is built, in a place dug for the purpose, and on the cage a tit as a decoy. When left there, the old birds come to feed their young, and are caught in the snare. As soon as they are taken, they must all be brought into the house, where the old and young must be put together in any aviary, or large cage, till the latter can fly; the window may then be opened for them to go out, but hunger will soon bring them back. As soon as they have exercised their wings, the old birds should be placed on the table in the window to call them back. In time, they become so familiar that they will accompany one in a walk, and there is no fear of their flying away. If they are not taken thus, it is necessary to wait for winter and snow to let them go out, and if they profit by the permission, to call them back by some of their species placed in a cage in the window. If you wish to be quite sure of success, you have only to put a board in the window, on which two females with their wings cut, can run about, go out, and return.

The green bird likes to build near canaries, and as these are good nurses, they are given the eggs of the green bird, which, like the goldfinches and siskins, learns to draw up its water and food.

THE PINE GROSBEAK.

Loxia Enucleator, Linnæus; Le Durbec, Buffon; Der Fichtenkernbeisser, Bechstein.

This is one of the largest species of grosbeak that we have, equalling the Bohemian chatterer in size. Its length is eight inches and a half, of which the tail measures three; the beak is short and thick, measuring only six lines; its colour is brown, the iris dark brown; the feet are from twelve to thirteen lines high, and blackish; the head, neck, breast and rump are of a light vermilion, with bluish tints; the feathers on the back and the lesser wing coverts are black, with reddish edges.

The female is generally of a greyish green, with some scattered reddish and yellowish tints, principally on the top of the head. It is not yet well known if this bird have the same changes of colour as the crossbill, since more yellow ones have been found than red. Experience shows that the same things take place in the house as out of doors. They acquire the yellow red, not only after the first moulting, but even before it. This change begins first round the beak, descends afterwards to the back and breast, and at last gradually extends over the whole body, so that what was red before becomes yellow; this yellow is darker than citron; all the red and yellow feathers are ash-colour at the base. The young are brownish, with a slight shade of yellow. During the first year the colour of the males is light red; it is only after this that they become darker vermilion or crimson; these birds are caught in autumn and winter, either in the noose or net, with elder or service berries as a lure.

Observations.—This bird is found in all the northern regions of Europe, Asia, and America, and in Europe rarely passes the fifty-third degree of latitude. It frequents the pine and fir forests, the seeds of which form its food; in winter it quits these places in search of berries; this is what ranks it among the erratic birds. They are so stupid, that in the north they are easily caught with a circle of brass wire fixed to the end of a long pole, to which are fastened some horse-hair rings, which are simply passed over the head of the bird. They are often caught and kept in cages, as they are liked, both on account of the ease with which they are tamed, and of their song, which is very agreeable; they will even sometimes sing in the night, and always preserve their song through the whole year while the wild only sing in the spring.

HAWFINCH.

Loxia coccothraustes, Linnæus; Le Grosbec, Buffon; Der gemeine Kernbeisser, Bechstein.

One must be a very great bird fancier to wish to have this bird in the house. Its length is seven inches, of which the tail measures two inches and a third. The beak, which is very thick in proportion to the rest of the body, is like a large blunt cone, dark blue in summer, and flesh-coloured, with the tip black, in winter; the slim feet are nine lines in height, and of a pale crimson; the yellowish brown of the forehead unites with the light chestnut on the top of the head and cheeks; the circle of the head is black, and forms, under the chin, a large square spot; the nape of the neck and upper part of the back are of a fine ash-grey, the lower part is of a dark brown, with some shades of grey on the rump.

In the females, the cheeks, head, and upper tail coverts are of a greyish chestnut colour; the throat, wings, and tail rather brown than black, the spot on the wings greyish, the under part of the body reddish grey, shading to white on the belly.

Habitation.—When wild, it may be found in all the temperate parts of Europe and Russia. It is very common among the mountainous countries of Germany, where the beech prevails in the forests. It is rather an erratic bird than a bird of passage, and its excursions are ended in March. Sonnini says, however, that he has seen it during winter, in Egypt, with the blackbirds and thrushes, and its excursions are ended in March.

In the house it is generally kept in a large wire cage, where it is soon tamed. It may also be let run about, provided it has not too many companions, and that it has food in abundance, for it is a very quarrelsome bird.

Food.—In its wild state it eats many different things; the fruit of the beech, elm, ash, and maple; the berries of the juniper, service-tree, and white-thorn; cherries and plums, the stones of which it breaks with the greatest ease, to eat the kernel; hemp seed, cabbage, radish, and lettuce seed also form a part of its food.

In the house, if confined in the cage, it is contented with rape and hemp-seed; and if it run about, with the second universal paste.

Breeding.—Its nest is well built; the eggs, from three to five in number, are greenish grey, spotted with brown, and streaked with blackish blue. The young, when reared from the nest, will become so tame as to eat from the hand, and will courageously defend itself with its beak against the dogs and cats; it may also be accustomed to go and come.

Mode of Taking.—The haste with which these birds come on hearing the call, makes it very easy to catch them in the net, by throwing berries or hemp seed on the trap. In autumn and winter they may be taken by the noose, with service-berries; in spring they may be caught by placing lime twigs on the nest. The loss of their liberty does not prevent their eating immediately rape or hemp seed.

Attractive Qualities.—I confess that it has very few; its song is less agreeable than any of the others', it is a kind of low whistling, mixed with some harsh tones; but its great tameness may please; it is necessary, however, to guard one's self from its beak.

THE CARDINAL GROSBEAK, OR VIRGINIAN NIGHTINGALE.

Loxia cardinalis, LINNÆUS; Cardinal huppé, ou Rossignol de Virginie, BUFFON; Der Cardinal Kernbeisser, BECHSTEIN.

THE length of this bird is eight inches, of which the tail measures three. Its beak is strong and light red, like its feet; the iris is dark brown; the head is ornamented with a tuft, which, when raised, is pointed; the throat and the part round the beak are black; the rest of the body is of a beautiful bright red; the pen and tail-feathers are less brilliant, and brown on the anterior part.

The female is in general of a reddish brown.

OBSERVATIONS.—The beautiful song of this grosbeak is so like that of the nightingale, that this name has been given it; but its voice is so strong that it pierces the ears. It sings through the whole year, except during the time of moulting.

In its wild state, its principal food is the seed of the Indian corn and buck-wheat; it collects a considerable quantity of this food, which it skilfully covers with leaves and twigs, only leaving a very small hole, as the entrance to this magazine. In the cage it is fed with millet, rape seed, hemp seed, and the like, which agree with it very well.

Some persons have endeavoured to make it breed in large aviaries in the middle of gardens, but I do not know that it has ever succeeded. In Germany it is very dear, being as much as six or eight pounds sterling for a pair.

THE JAVA SPARROW, OR RICE BIRD.

Loxia orycivora, LINNÆUS; Le Padda, ou Oiseau de Riz, BUFFON; Der Reiskernbeisser, BECHSTEIN.

THIS bird is about the size of a bullfinch, and five inches in length, of which the tail measures two. The beak is thick, and of a fine rose colour; the feet are paler; the eyelids naked, and edged with rose colour; the head, throat, and streak which surrounds the cheeks, are black; the cheeks are white; the rump, tail, and greater pen-feathers are black, but all the rest of the upper part of the body, the wing-coverts, hinder pen-feathers, and breast, are of a dark grey; the belly purple grey; the lower tail-coverts white. "The whole plumage," says Buffon, "is so well arranged, that no one feather passes another, and they all appear downy, or rather covered with that kind of bloom which you see on plums; this gives them a very beautiful tint."

In the female the colours are rather lighter on the back and belly: the young are not only paler, but also irregularly spotted with dark brown on the cheeks and lower part of the belly.

Observations.—There are few vessels coming from Java and the Cape of Good Hope that do not bring numbers of these birds, which have as bad a character in those countries, and particularly in China, their native place, as the sparrows have amongst us, on account of the ravages they make in the rice fields. They have nothing attractive but their beauty, for their song is short and monotonous. They cost four or five pounds sterling a pair in Germany.

THE WAXBILL.

Loxia Astrild, **Linnæus**; Le Sénégali rayé, **Buffon**; Der Gemeine Senegalist, **Bechstein.**

This bird is hardly larger than a golden-crested wren, its length being four inches and a half, of which the tail measures two inches; the beak is rather rough at the base, and of a dark red; the band which crosses the eyes, the centre of the breast and belly, are red; the upper part of the body is brown, and the lower reddish grey, the whole streaked with transverse blackish lines, which become finer as they approach the head; the quill-feathers are brown, as well as the tail, which is wedge-shaped, and streaked with darker transverse lines; the feet are brown. These birds change colour like the amandava finch; thus some are found with the tail entirely brown, others which have the rump crimson, and the rest of the body brown above and white below, and some have the belly yellow, and the back spotted with white; there are some, indeed which have the neck and throat bluish, the under part of the body white, mixed with iron colour, and the upper part blue.

Observations.—They inhabit the Canary Islands, Senegal, Angola, the Cape of Good Hope, and may even be found as far as India, whence they are brought to Europe. Their beautiful shape, their amiable disposition, and the affection which they show to every one indiscriminately, render them such favourites, that a dozen may be often seen in one cage. Their song is scarcely any thing. They are fed on millet, which also forms their food in their native country, to the damage of the fields which are sown with it. They approach villages like our sparrows; they are caught in traps made of the shell of a gourd, and cut like a bowl, on which some millet is scattered.

THE AMANDAVA.

Fringilla amandava, LINNÆUS; Le Bengali Piqueté, BUFFON; Der Getiegerte Bengalist, BECHSTEIN.

THIS beautiful little bird, which is brought to Europe in great numbers from Bengal, Java, Malacca, and other tropical countries of Asia, is only four inches long, of which the tail measures one and a third. Most ornithologists class it with the sparrows, but it seems to me that it belongs rather to the grosbeaks. Its beak is short and thick, being only four lines in length, and the diameter at the base measuring three. Its colour is deep bright red; the iris is also red; the feet are six lines in height, and of a pale flesh-colour; in the male the head and under part of the body are of a fiery red, the upper part of a dark grey, but the feathers have a broad red edge, so that this colour seems to prevail; thus the edge of the feathers on the rump make it appear of a brilliant orange, though, like the belly, it is properly black; the feathers of the back, tail, sides of the breast and belly, the wing-coverts, hinder quill-feathers, and both tail-coverts, are terminated at the tip with shining white spots, which are largest on the hinder quill-feathers, and larger wing-coverts, the colour of which is otherwise black.

The female is one third smaller than the male; part of the upper mandible is black; the head and upper part of the body, including the wing-coverts, are of a dark ash-colour; the feathers on the rump have only an orange edge, with a light tip; the cheeks are of a light grey; the under part of the body is pale sulphur, the pen-feathers blackish; the greater and lesser wing-coverts are finely speckled with white; the tips of the tail-feathers are greyish white.

The male varies in its colours for several years before it permanently acquires those above described: it may be seen with the back grey, slightly tinted with red, the belly black, speckled with yellow; others with the back reddish grey, spotted with bright red, and the belly of a sulphur yellow, with black rings, and more or less speckled, &c.

OBSERVATIONS.—These birds are as sociable as the waxbills; if there should be twenty or thirty in the same cage, they perch close against one another on the same perch; and, what is more singular they never sing together, but one after another, the rest keeping quite silent to listen to the songster. Their song resembles that of the hay bird, and continues through the winter. The females do not sing; those are wrong who think the contrary. They are very active, often bowing and spreading their tail like a fan. In their native country their food consists of different seeds, particularly millet; this is also given it in the cage, as well as canary seed. They eat and drink a great deal. They will live from six to ten years.

THE PARADISE GROSBEAK.

Loxia erythrocephala, LINNÆUS; Le Cardinal d'Angola, BUFFON; Der Paridiese-Kernbeisser, BECHSTEIN.

THIS species is about six inches long; the beak and feet are flesh-coloured, the head and chin red; the upper part of the neck, the back, rump, and wing-coverts, bluish grey; the upper tail-coverts are tinged with grey; the under part of the body white, with dark brown spots on the sides; the wing-coverts white at the tip, which forms two transverse streaks on the wings; the pen and tail-feathers are of a dark grey, with lighter tips. The female does not differ from the male.

OBSERVATIONS.—The male sings through the whole year, but its voice is so weak that the least noise overpowers it. In England this species has been made to breed in an aviary. Its food is millet and rape seed, and sometimes a little hemp seed.

THE REDBILL.

Loxia sanguinirostris, LINNÆUS; Le Becsanguin, BUFFON; Der Rothschäbliger Kernbeisser, BECHSTEIN.

THIS pretty little bird is three inches and a half long, of which the tail measures one inch, and the beak four lines. The feet are nine lines in height, the middle claw measures five lines and the side ones four. The beak is strong, rather naked at the forehead, and of a dark blood red; the feet are of a very red colour, the claws black; the eyelids red, and irides orange, the circle of the beak, including the forehead, eyes, and chin, is black; the top of the head rust-colour, more or less approaching to red, scattered with blackish spots, formed by the black of the feathers; the under part of the body of a brownish red, clouded with white, and lighter on the sides and the lower part of the belly, the whole spotted with black in the young birds, but with no spots in the old ones.

The female is altogether lighter, and has no black on the head, but two dark grey streaks above and under the eyes; the under part of the body is only reddish grey.

Observations.—This species is found on the coasts of Africa, in Bengal, and other parts of Asia. It is a very agreeable bird, and though its voice is weak its song is only the more melodious. A male and female put together in a cage seem to be taken up with their mutual affection, always feeding and caressing each other. They are fed on crushed canary and hemp seed, which preserves them in good health for several years. The room in which they are kept must be heated during winter.

THE DOMINICAN.

Loxia Dominicana, Linnæus; Lo Paroare, Buffon; Der Dominicaner Kernbeisser, Bechstein.

This bird is about the size of a lark. The upper part of the beak is brown, and the lower light flesh-colour; the feet are grey; the front of the head, the throat, and part of the neck red; the back of the head is blackish, with a slight mixture of white.

Observations.—This bird comes from Brazil, and possesses nothing attractive but its beauty. Its song is merely an occasional call. In Germany it costs three pounds sterling.

THE GRENADIER.

Loxia orix, Linnæus; Le Cardinal du Cap de Bonne Espérance, Buffon; Der Grenadier Kernbeisser, oder Feuervogel, Bechstein.

This bird is about the size of a sparrow. The beak is black; iris chestnut; feet dark flesh-colour; forehead, sides of the head, chin, lower part of the breast and belly blackish; the throat, top of the head and breast, rump, vent, and tail are of a fiery red, or brilliant carmine, and soft, like velvet.

Varieties.—1. A black spot on the chin; thighs red.

2. Tail dark brown, with a greyish white border.

In the female the beak is raven black, the upper part of the body dark brown, with light grey edges to the feathers; the head dark grey, with a whitish streak which passes above the eyes; the under part of the body light grey. From this it seems to be very like the house sparrow; its plumage is, however, altogether lighter.

The male takes these colours, in the house, at the second moulting, but the streaks are darker, the feathers of the upper part of the body being blackish, with broad borders of reddish grey; the streak above the eyes is of a pale sulphur. When wild, the males, immediately after pairing, which is in January, lose their red feathers, and become like the females, but have them again in July, about the time of the second breeding season. They are pretty whilst moulting, when the head and body are speckled, the tail and neck still remaining red.

Observations.—These birds, which are very numerous in all the colonies at the Cape of Good Hope, do as much mischief there to the flowers and ears of corn, as the sparrows do in Europe. When retiring by thousands in the evening, from the fields to the reeds, they make such a noise with their chirping as may be heard to a great distance. Their call is like the sparrows' "*dib, dib*," and their song as weak as that of the siskin; the nest is skilfully constructed with small twigs interwoven with cotton, and has but one opening, with two compartments, one above the other, the upper for the male and the lower for the female; the eggs are green.

These birds, when kept in a cage, are fed on canary seed. The male and female never like to be separated; there is no instance, however, of their breeding in these climates.

THE CAPE FINCH.

Loxia Capensis, **Linnæus**; Le Pinson noir et jaune, **Buffon**; Der Capsche Kernbeisser, **Bechstein**.

I have one of these birds, which is about the size of a bullfinch: its length is six inches and a quarter, of which the tail, which is rather wedge-shaped, measures two and a half. The beak is whitish above, very much compressed on the sides, and very pointed; the iris dark brown; feet dark flesh-colour. The head, neck, top of the back, all the under part of the body, and the tail are of a fine velvet black.

The female, which is light brown, has a black spot in the centre of each feather; the sides of the head and greater wing coverts are grey white, streaked with black; the lesser coverts and the rump of a light yellow; the tail-feathers edged with grey; the beak pale or raven grey.

The plumage of the male after pairing is like that of the female.

Observations.—This bird, which comes from the Cape of Good Hope lives very well in the house; it is kept in a cage, alone or with the female, and fed with hemp and canary seed. In its native country it frequents the edges of streams and rivers, feeds on seeds, but is not so mischievous as the preceding. The eggs are grey, spotted with black. It is said to be nice to eat.

THE CAFFRARIAN FINCH.

Loxia Caffra, Linnæus; Le Caffre, Buffon; Der Mohren Kernbeisser, Bechstein.

This bird is very little larger than the bullfinch, but its long and raised tail is about twice the length of its body: it is only ornamented with it during the pairing season. The beak is brown grey; the feet grey; the prevailing colour of the plumage is velvet black: the shoulders are red; the coverts white; the pen-feathers brown grey, with a white border.

The female is always grey, and has only a little red on the shoulders. The male acquires its beautiful black plumage at the beginning of November, and loses it in January, to assume the colours of the female.

Observations.—This species, which is found in the interior of the country north of the Cape, lives and builds in marshes: it is rarely brought to Europe. The long tail of the male requires a large cage in order to preserve its beauty. In its wild state this length of tail is very inconvenient during the high winds; and during the rainy season it may be caught by the hand. It is fed with canary seed.

THE BLUE FINCH.

Loxia cœrulea, Linnæus; Le Bouvreuil bleu d'Amérique, Buffon; Der dunkel. blaue Kernbeisser, Bechstein.

This bird is the size of the common grosbeak, about six inches and a half in length, of which the tail measures two. The beak, which measures six lines, is strong, and of a dark brown; the feet black; a black streak surrounds the chin. and extends to the eyes: the whole plumage is blue, except the greater wing coverts, the pen-feathers, and the central tail feathers, which are dark brown.

The female is entirely brown, with a slight mixture of blue.

Observations.—I have had an opportunity of observing this bird among the collection belonging to his Royal Highness the Duke of Saxe Meiningen, where it is fed on canary seed. It calls little, and its song is weak, but its plumage is beautiful. It is found in several parts of America, in Brazil, Cayenne, and even in Carolina.

YELLOW-BELLIED GROSBEAK.

Loxia flaviventris, Linnæus; Le Grosbec jaune du Cap de Bonne Espérance, Brisson; Der gelbafterige Kernbeisser, Bechstein.

I am not sure that this bird, which I have also seen amongst those of his Royal Highness the Duke of Saxe Meiningen, is the true *Loxia flaviventris* of Linnæus. It is of the size of the common chaffinch, and five inches long. The beak, which is moderately strong, very much resembles that of the chaffinch, and is of a horn brown. The feet are a dull brown. The head and neck are of a dull pale blue; the upper part of the body olive, the whole of the under part is a fine bright orange.

The Yellow Grosbeak of the Cape of Good Hope is thus described:—the head, upper part of the neck, and back are olive, with stripes of brown; the rump olive. The under part of the body deep yellow; on each side of the head is a yellow band which passes above the eyes; the wings and tail feathers are brown, edged with olive.

The female only differs in the colours being less vivid.

Variety.—The top of the head, the upper part of the body, and the breast are olive; the back of the neck, even to the throat, is ash-coloured; the belly yellow, but between the legs white. The wings are black, bordered with orange; the tail feathers dark green, but they are bordered with yellow, and are black up the middle.

Observations.—This bird has been sold as the female of the preceding, and placed in the same cage. It lived very sociably; but I should suspect it rather of being the female of that under notice. It is a native of the Cape of Good Hope.

THE GOWRY BIRD.

Loxia punctularia, **Linnæus**; Le Grosbec tacheté de Java, **Buffon**: Der getüpfelte Kernbeisser, **Bechstein**.

This bird is the size of a linnet, about four inches and a quarter in length. The beak and feet black; the whole of the upper part of the body, and the lower, as far as the breast, chestnut brown; the cheeks marked with a reddish purple tinge; the belly and sides white, but all the feathers bordered with black in the form of a heart.

The female has no red tinge on the cheeks, the beak and feet are deep brown; the sides white, tinged with deep brown: the back reddish brown.

Observations.—This species, which I have seen in the collection of His Royal Highness the Duke of Saxe Meiningen, comes from Java; it is kept in a cage and fed on canary seed. Its call is "*deguay*," its feeble song somewhat resembles the siskin's.

THE BANDED FINCH.

Loxia fasciata, **Linnæus**; La Collerette; Der gebänderte Kernbeisser, **Bechstein**.

This bird is the size of the preceding, about four inches and a half in length. The beak is bluish grey. The feet short and flesh-coloured; the upper part of the body dark reddish ash grey, each feather having two black transverse bands, only one of which is visible; the cheeks and lower mandible are surrounded by a band of dark reddish purple.

The female has not this collar, and its plumage is paler; the under part of its body is red brown, each feather edged with a deeper shade.

Varieties.—The one I have actually before me, and which I received from Mr. Thiem, bird-dealer at Waltershausen, is a fine male, whose plumage is as follows:—

The head is dull orange, with black stripes very near together; the upper part of the neck, the back and rump, are the same shade of orange, but each feather is intersected by a semicircular black line, and terminated by a spot of red brown; the scapular wing coverts and last pen-feathers are dark grey, with transverse angular black bands, and bordered at the tips with red brown.

2. This variety is thus described in Latham's Synopsis of Birds.

The top of the head, upper part of the neck, and lesser wing coverts, light brown, with semicircular black lines; the cheeks plain brown, but edged at the lower part with bright crimson, below which is a black line; the breast and belly light brown, occasionally marked with semicircular lines; the pen-feathers and tail are brown.

Observations.—Bird-fanciers give to these the name of Indian sparrows though they come from Africa; their cry is similar to that of the common sparrow, and their song not very different. They are fed on canary seeds.

THE BROWN-CHEEKED FINCH.

Loxia canora, Linnæus; Der braunwangige Kernbeisser, Bechstein

This bird is the size of the siskin, and four inches in length The beak short, strong, and horn brown. The feet flesh-colour. The cheeks brown, adorned with a yellow border from the throat to the back of the ear. The female has no yellow border to the cheeks.

Observations.—This pretty species comes from Mexico; its song is soft and clear; its actions are as lively as they are amusing. It is kept in a cage, and fed on canary seed and millet.

THE MALACCA FINCH.

Loxia Malacca, Linnæus; Le Jacobin, Buffon: Der Malackische Kernbeisser, Bechstein.

This bird is the size of the greenfinch, and four inches and a half in length, of which the tail measures one and a half. The beak thick, five lines in length, and bluish grey; the feet the same colour. The head, neck, a stripe, which extends up the belly to the vent, and the thighs, are black; the back, wings and tail, pale chestnut.

The following is mentioned as a *variety.*

The Chinese Grosbeak (*Brisson's Ornithology,* III., *page* 235, *No.* 7), with the head, throat, and front of the neck black, the upper part of the body red brown or chestnut, the wings and tail similar to the one above.

I have seen this bird in a room several times, and have always regarded it as a male, on account of its song, and because, after moulting, its plumage returned unaltered, not becoming either white on the breast or black at the vent.

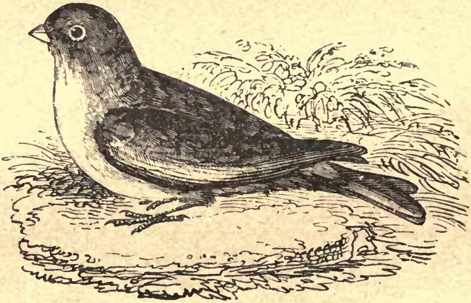
Edwards, who has represented it in his 355th plate, has added a female, which he kept in the same cage, and which was improved by its companion. The upper part of its body was grey brown, the sides of the head and under part of the body pinkish, or rather blush colour, the wing and tail feathers blackish, the feet flesh-colour.

The blackness of the wings and tail makes me suspect that this female belongs to another species; its attachment and familiarity prove nothing. We know, in fact, that nearly all granivorous birds hold communion together, and mutually caress each other with the bill.

Observations.—The Malacca Finch comes from the East Indies: it is very gentle, confiding, and lively. Its voice is strong; its cry, "*tziapp*," pronounced in a loud clear tone. Though its song is somewhat nasal and rather noisy, it is not disagreeable.

Its food, when in confinement, is hemp and canary seed, which I have known preserve it for a long time in good health.

THE SNOW BUNTING



Emberiza nivalis, Linnæus; L'Ortolan de neige, Buffon; Der Schneeamer, Bechstein.

Naturalists say that the plumage of this bird differs considerably in summer and winter; though, from analogy with others of its species, I am authorized in suspecting that this change arises rather from age. I shall leave the question undecided; and since we can never see this bird when it has retired in summer within the arctic circle, its native home, I shall content myself with describing its winter colours, such as we may see them in a room.

It is the size of a lark, six inches and a half in length, of which the tail measures two and two-thirds. The beak is five or six lines in length, with every characteristic of the bunting species, conical in form, rather bent at the sides, and having a bony tubercle like a grain of barley at the palate; its colour in the singing season is quite black, at other times the point alone is black, the rest yellow. The back and rump are black, the feathers of the back being edged with white, whilst those of the rump and scapulars are edged with yellowish brown, darker in spring than summer.

The female is rather smaller, the head and upper part of the neck white, with a mixture of cinnamon-brown, and transverse spots of the same colour form a kind of broken band across the white breast.

The young ones which are taken in winter are known by their dark brown beak; the lower part of the back is of the same colour, but their feathers are edged with a light grey. The male has the head most speckled with yellow brown, the cheeks of the female are of the same tint, and it has spots of this on the breast.

Observations.—When the winter is severe, these birds are seen from December to May in many parts of Germany, where they even approach the villages. I am persuaded that, if attention were paid to them, they might be seen in every direction, during March, on their passage to the North; whilst snow is on the ground they are found in company with larks, on the high roads and in the fields; they may then be taken with horse dung, placed in net, or covered with birdlime, or by clearing a spot of ground of snow and strewing it with oats. I have had a pair six years in my room without a cage, and they are satisfied with the food common for other birds: if kept in a cage, they must be fed on hemp seed, oats, millet, rape, and poppy seeds. They appear much delighted whilst bathing; during the night they seem very uneasy, hopping and running about continually. Their strong and piercing cry resembles a loud whistle; their song would be rather agreeable were it not interrupted in a peculiar manner; it is a warbling mingled with some high noisy notes, descending slowly from shrill to deep, and a little strong and broken whistling. Heat is so contrary to their nature, that they cannot be preserved unless carefully guarded from it.

THE MOUNTAIN BUNTING

Emberiza montana, LINNÆUS; L'Ortolan de Montagne, BUFFON; Der Bergammer BECHSTEIN.

THIS bird is smaller than the snow bunting, has a short, strong yellow beak, with a black point; the head is nearly flat, the frontal band light chestnut; the upper part of the neck and back grey, with black streaks, most numerous on the back, causing a resemblance to the female yellowhammer; feet black.

The breast of the female is of a deeper colour than the male's.

OBSERVATIONS.—This species, inhabiting the cold regions of Europe, is never found in great numbers. In Thuringia, and some other provinces of Germany, they are seen generally every year, in March, the time of passage, settling in pairs along the high roads, searching for a few undigested grains in the dung of animals. Their song is shrill, tolerably pleasing, and interrupted like the yellowhammer's. They may be easily kept in the house, either caged or not, feeding them on oats, bread, hemp, and other seeds. These birds also appear uneasy during the night, especially in the pairing season, uttering their call amidst the darkness. Some are occasionally met with of a dull orange on the upper part of the body, streaked with yellow on the head, and deep orange on the back. These are young birds. This species is caught in the same manner as the snow bunting.

THE YELLOWHAMMER.

Emberiza citrinella, LINNÆUS; Le Bruant, BUFFON; Der Goldammer, BECHSTEIN.

HOWEVER well known this bird may be, it is still necessary that it should be described minutely, as the young males and old females are often confounded with one another. It is six inches and a half in length, of which the forked tail measures three. The beak, five lines long, is dark brown in summer, and ash grey in winter; the feet are of a light brown. The head of the old males is of a fine yellow, generally having some streaks of dark olive scattered over the top and on the cheeks; it is only in very old birds that the head and neck are of a golden yellow, without any mixture; the upper part of the neck is olive; the back black, mingled with reddish grey; the feathers have black up the middle, and the edges reddish grey; the rump is of a deep red; the throat, with the under part of the neck and the belly, are yellow, more or less golden; the breast, especially its sides, as well as the small coverts of the tail, is streaked with yellow and red.

The female is rather smaller than the male; the yellow of the head, neck, and throat, is scarcely seen through the spots scattered over it, which are brown on the head and cheeks, and olive-coloured on the neck; the breast is only speckled with rust red, and the wing coverts with reddish white, so that at a distance it appears rather brown than yellow.

Young male birds, in spring, scarcely differ from old females, except that a spot of yellow may even then be seen on the top of the head, as well as a streak of the same colour above the eyes and on the throat; in fact, the breast and rump are rather of a deep reddish brown than rust red, and also without spots.

Habitation.—In its wild state the yellowhammer is found in all parts of Europe, and the north of Asia. It remains in summer about the skirts of forests and small woods. It overruns the fields in autumn, and in the winter approaches our buildings, particularly barns and stables.

When confined it is generally allowed to run about the room, but where it is rare, and therefore most valued, it is kept in a cage.

Food.—When wild these birds live on insects, particularly caterpillars, on which, like all the other species of this genus, they feed their young. In autumn and winter, they have recourse to all kinds of grain; but they prefer oats, which, with barley, wheat, and millet, they know how to get at very cleverly, notwithstanding the bony tubercle at their palate. They also feed upon rape, and other small seeds, when they can get them.

In the house, to preserve them in health, their food should be properly varied, giving them in turn oats, the crumb of white bread, meat, bruised hemp seed, poppy and rape seed. When running about, the second universal paste agrees very well with them. It is no doubt to assist their digestion, that they often swallow fresh black earth, as I have always seen those do that I have kept; this must not be forgotten to be given them, nor water for them to bathe in, which they enjoy very much.

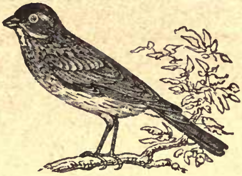
Breeding.—This species breeds twice in the year, the first time in the end of March, or the beginning of April. The nest, which is placed in a hedge, bush, tuft of grass, or even in moss on the ground, is formed on the outside of straws, interwoven and lined within with the hair of horses and other animals. It contains from three to five eggs, of a dirty white, with zig-zag lines and spots of brown. When reared from the nest the young ones may be taught to imitate the song of the chaffinch, and a few notes of other birds.

Diseases.—The disease most common to this bird is decline. The time of moulting is very dangerous to them, as they suffer much, and sometimes die; to render this period less dangerous, they should have fresh ants' eggs as soon as it commences, a remedy most useful to this species, to chaffinches, and to sparrows.

Mode of Taking.—The yellowhammer is easily taken in winter, near our dwellings, either in a net, with a stalk of oats as a bait, or under a basket or sieve, which may be thrown down by drawing away the small stick that supports it, by means of a string. They will also enter the area or barnfloor trap, if a perching bird is fastened there, by a string attached to the leather band round its body; in spring they may be caught like other birds, by means of a bird-call.

Attractive Qualities.—The first of these is certainly the beauty of the bird, but the fine yellow which sets it off fades gradually when kept in the house, where it will live five or six years; the second is its song, which, without being very distinguished, is rather pleasing; its call, though not strong, is heard to some distance; but this bird, so gay, so spruce, so active when free, becomes dull, idle, and awkward in a cage.

THE CORN BUNTING.



Emberiza miliaria, Linnæus; Le Proyer, Buffon; Der Gerstenammer, Bechstein.

This species, found throughout Europe and the north of Asia, has not so good a title to be admitted into the house as the preceding, not being distinguished either for its song or the beauty of its colours. With a plumage very similar to that of the sky-lark, it surpasses it in size, being seven inches and a half in length, of which the tail measures three. The beak, measuring six lines, is strong, yellowish on the under part in summer; the rest of the year the whole of it is grey brown; the feet the same, which stand six lines in height. The general tint of the plumage is pale, reddish grey on the upper part of the body, and yellowish white on the under, speckled like the lark's, with blackish brown spots.

In the female the colours are rather lighter.

Habitation.—In its wild state this bird is common in most parts of Europe; in the more northerly parts it does not remain during the winter, and only appears at certain seasons; in March they are met with amongst the larks in the fields, meadows, and on the high roads, often perched on the tops of willows, or on a stake in a hedge, on a milestone, or a clod of earth.

In a room it may occupy a lark's cage, but is more commonly let run about at liberty.

Food.—Both at liberty and in confinement its food is similar to that of the yellowhammer; it is however a more delicate bird.

Breeding.—Its nest, placed under a bush, does not rest on the ground but on the turf; it is constructed of the stalks of grass, and lined with horsehair. The eggs are grey, speckled with chestnut and streaked with black.

Mode of Taking.—In autumn these birds may be taken in an area with a decoy bird; in winter, before the barn door, with birdlime or a clapper; in the spring with a bird-call.

Attractive Qualities.—Their song, shorter and less soft than that of the yellowhammer, has only four or five notes; from their dwelling on the *r* in the last, they have been given the name of ***stocking weavers.***

THE ORTOLAN.

Emberiza hortulena, Linnæus; L'Ortolan, Buffon; Der Gartenammer, Bechstein.

It is necessary to give a very exact description of this species, as not only birdcatchers, but even some naturalists, give the name of Ortolan to several very different species. Under this name the former sell all rare birds of this kind. The true ortolan has a wider breast and stronger beak than the yellowhammer; it is six inches and a half in length, of which the tail measures two and a half; the beak, six inches long, is thick at the base, with a bony tubercle at the palate, and is of a yellowish flesh-colour; the iris dark brown. The legs, which stand ten lines in height, are flesh-coloured; the head and neck is greyish olive; the throat and a streak on the neck from the angle of the beak, deep yellow.

The female is rather smaller, of a changeable shining ash-colour on its head and neck, streaked with fine black lines. Its breast, and the upper and under part of its body, are lighter than in the male.

The throat of the young male birds, before the first moulting, is of a light yellow, with a mixture of grey; the breast and belly are of a reddish yellow, speckled with grey, which make them rather resemble young yellowhammers. A bird fancier will distinguish the two sexes even in the nest. There are white, yellow, speckled, and in the house sometimes even black varieties.

HABITATION.—In its wild state the ortolan is principally found in the southern and temperate parts of Europe, and is not scarce in some of the provinces of Germany; but if attention were paid to them there, they might be seen in every direction on their passage; for though they may not remain during the summer in a district, yet they make some stay, never passing over a great space of country at a time. Their route is so exact and regular, that when one has been seen in a particular spot, especially if in spring, it is sure to be found there the following year at the same time. They fly rather in families than flocks: the time of their arrival in Germany is towards the end of April, or beginning of May; they are then met with in orchards, amongst brambles or in groves, where they build, particularly if millet is cultivated in the neighbourhood. During harvest they frequent the fields in families, and leave after the oats are gathered in*.

In the house, if much valued, they are given a cage; but in countries where they are common they are let run about free.

FOOD.—In their wild state they live on insects and grain. In the house they are fed, if in a cage, on millet, hemp seed, and prepared oats; if at liberty in a room the universal paste suits them very well. These birds, being rather delicate, cannot often be preserved beyond three or four years.

DISEASES.—The most common disease of these birds is atrophy, to cure or prevent which it is necessary to know how properly to mix and vary animal with vegetable food; but this calls for a greater degree of attention and care than most persons are willing to give.

MANNER OF TAKING.—In spring these birds are easily attracted to a decoy bush, by a female of their own species, or a yellowhammer. In August a turfy place should be chosen near brambles, to form a small area, as a decoy, like that made for chaffinches. It must be surrounded with a low hedge, with some oat-ears fastened to it. About the area should be placed one or several birds of call, especially a perching bird, that is to say, a bird of the same species, with a band of soft leather round it, and confined by a small string, fastened to a peg-stick in the ground, which prevents its going beyond the prescribed limits. Here it should be given plenty of food and water, in order that the birds to be caught may be the more easily attracted within the area, from seeing one of their own species in a place of abundance. This kind of decoy bird is often more necessary than any other.

ATTRACTIVE QUALITIES.—The fine form and colours of the ortolan would be sufficient to render it desirable, but still more so its flute-like warbling, so clear and full, which has some resemblance to that of the yellowhammer, only that the last notes are much deeper.

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* It is not found in Britain.—TRANSLATOR.

Ever since ortolans have been known to epicures as a delicacy, they have been fattened with great care. The common way is to keep them in a room only lighted by lanterns, so that they cannot distinguish day from night: they are then plentifully fed on oats, millet, and the crumb of white bread, made up with good spice. In a short time they become so fat that they would be suffocated if not killed at once. An ortolan thus fed is a perfect ball of most delicious fat, weighing about three ounces.

THE CIRL-BUNTING, Lath.

Emberiza Cirlus, Linnæus; Le Zizi, ou Bruant de Haie, Buffon; Der Zaunammer, Bechstein.

Linnæus has described only the female, and by mistake I have called the male *Emberizal Eœathorax*, and have given a drawing of it and the female, in the second volume of my German translation of the English work of Latham, Synopsis of Birds, printed at Nuremberg, 1794.

Description.—This bird, scarce in many provinces of Germany and in Britain, but well known in Thuringia, is about the size of the yellowhammer, being five inches and a half in length, of which the tail measures two and a half. Its small and flattish beak is of a brownish blue on the upper part, and light brown on the under; the feet, eight lines in height, are flesh-coloured; the upper part of the head and neck olive green with small black strokes, a golden yellow streak extends from the angle of the upper mandible to the middle of the neck, passing under the eyes; another begins from the angle of the under mandible, and descending in a straight line, is crossed by a third, which is black, then curving round behind the yellow streak under the eyes, reunites with the black one on the throat; the back and smaller wing-coverts are cinnamon brown, mixed with black and yellow green; the rump is olive, with black streaks; the breast is a fine olive green, light chestnut on the sides; the rest of the under part of the body is of a golden yellow.

The female is known by its plumage being much paler: the head and upper part of the neck are olive, much streaked with black; the back is pale brown, the rump more streaked with black, the tail rather greyish black than black; two pale yellow lines pass one above the other below the eyes, and cross a black line which unites to the black border of the cheeks; the throat is brownish, with a lighter spot below; the breast is olive, with the sides brownish, the rest of the under part of the body is pale yellow.

The young ones, before their first moulting, have the upper part of the body light brown, speckled with black, the under pale yellow streaked with black; the older they grow the more of an olive tint the breast acquires.

Habitation.—In their wild state these birds dwell chiefly in the southern and temperate parts of Europe, where they frequent orchards, groves, and the skirts of forests.* They are birds of passage, which leave in November and return in April; they are then met with very commonly among the chaffinches.

In the house they must be treated in the same manner as the ortolan.

Food.—In their wild state they feed on the cabbage caterpillar in summer, and when corn is ripe, on wheat, barley, millet, oats, and other grain.

Breeding.—They place their nest in a hedge or bush on the road side, and build it of small straws and line it with horse-hair. The eggs are greyish, speckled with chestnut. In the end of July whole families are met with in the fields, particularly those planted with cabbages, and that have willows in the neighbourhood.

Diseases and Mode of Taking.—These are similar to what is said under ortolan.

Attractive Qualities.—The male surpasses the ortolan in beauty, but does not equal it in its song, as in this it more resembles the yellowhammer.

These birds, however, are very easily tamed, and may be preserved five or six years.

THE FOOLISH BUNTING.

Emberiza Cia, Linnæus; Le Bruant Fou, Buffon; Der Zipammer, Bechstein.

This bird is rather smaller than the yellowhammer, being only six inches long, of which the tail measures two and a half; the beak, five lines in length, is very sharp, blackish above, and greyish below; the iris is dusky; the legs, nine lines in height, are of a brownish flesh-colour. The head is grey, spotted with red, with small black streaks on the top, and an indistinct black line on the sides; the back is reddish brown, speckled with black, the rump light red brown; the throat pale ash-colour.

The female differs very little from the male: the head is grey with a reddish tint and black spots; she has also all the streaks that the male has, but less marked; the ash-coloured throat is streaked with black and has a reddish tint; in short, the whole of the under part of the body is lighter.

Habitation.—When wild, this species, which loves solitude, and prefers mountainous districts, inhabits the south of France, Italy, and the south of Austria. In some winters they quit these countries and proceed even to the middle of Germany, where they are found in March and April in elevated situations.

In the house they are either kept in a cage or left to range a room, and the latter seems to agree with them best, particularly if they have a grated and quiet place to rest in and pass the night.

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* Those occasionally caught in the South of England may be purchased in London at about 7*s*.—Translator.

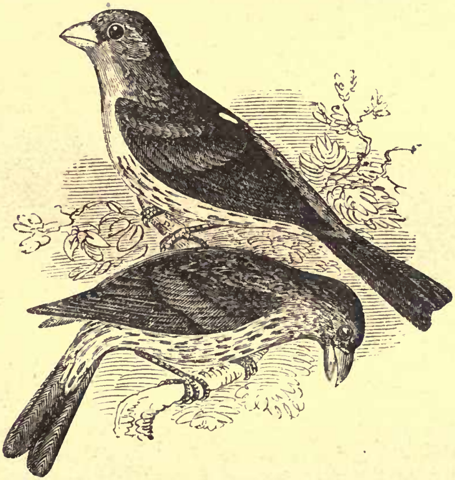
Food.—When wild, these birds, like others of the genus, feed on insects and grain.

In the House they may be fed on the same food as the ortolan, on which they may be preserved in health above six years, as I have proved by a pair which I kept myself for that time.

Mode of taking.—These birds come without difficulty at the call of the yellowhammer, and enter into every kind of snare so heedlessly, that they have thence been given the name of *foolish bunting.*

Attractive qualities.—They are very fine and lively birds, whose voice is heard the whole year; in winter their note of call, and from spring to autumn, their cheerful song, shorter indeed, but clearer than that of the yellowhammer. They live very amicably in a room with other species of their genus, especially the yellowhammer; and where one goes the other follows, and if one chooses any particular food, the other prefers the same.

THE BLACK BONNET, OR REED BUNTING.



Emberiza Schœniclus, Linnæus; L'Ortolan de Roseaux, Buffon; Rohrammer, Bechstein.

This bird is nearly the size of the mountain sparrow, its length being five inches three-quarters, of which the tail meatures two and a half; the beak, four lines in length, is black on the upper part, and whitish on the under; the iris is dark brown; the legs, nine lines high, are dark flesh-coloured. The head is black, with reddish spots; a reddish white line extends from the base of the lower mandible quite round the head; the back is black, spotted with white and red, the rump alternately grey and reddish yellow; the throat is black spotted.

The feathers on the head of the male never return to as good a black after moulting, when in the house, as in its wild state, but remain always browner, and clouded with reddish white.

The head of the female is of a rusty brown, spotted with black; her brown cheeks are encircled with a reddish white streak, which, passing above the eyes, unites with another which commences at the base of the beak; a dark streak passes down the sides of the throat, which, with the under part of the body, is reddish white, much streaked on the breast with light brown; the colour of the back is lighter, but less clear than that of the male.

Habitation.—In their wild state this species is found throughout Europe and the north of Asia, flying in small flocks, and returning in March in great flights. The females follow the males, and do not remain behind, as some pretend. During winter some of these birds are met with here and there amongst the yellowhammers; they frequent moist places, the banks of ponds and rivers; they run nimbly up the stalks of aquatic plants, but rarely ascend trees.

In the house it is the custom here to let them range a room; but they may be kept in a cage.

Food.—When wild they feed on the seeds of rushes, bullrushes, reeds, and grasses, as well as on the numerous insects that frequent the water side.

In the house they seem to relish the first universal paste and poppy seeds, on which food they will live five or six years; but afterwards they droop and die of atrophy or scurf, as I have remarked several times.

Breeding.—These birds make their nests among the reeds and brambles on the water-side. They lay five or six eggs of a dusky light grey, with dark grey spots and dusky lines rather indistinctly mingled.

Mode of Taking.—In autumn they enter the area or decoy with the chaffinch; in spring, when there is snow, they approach the barns and dunghills, and there, as well as in open places in the fields and on the hedges, they are very easily taken with a net or birdlime.

Attractive Qualities.—Their song is alternately weak and strong. Three or four simple tones, mingled from time to time with a sharp *r*, distinguish it from every other; it is heard all the summer, even during the night. Of all the buntings, this is the most easily tamed; it is also a great amateur of music, approaching the instrument without fear, as I have observed several times, not of one only, but of many of these birds, testifying its joy by extending its wings and tail like a fan, and shaking them so that, by this exercise the feathers have been much injured. The female sings also, but its tones are weaker than those of the male.

THE SPARROW BUNTING.

Emberiza passerina, Linnæus; L'Ortolan Passerin; Der Sperlingsammer, Bechstein.

This species must have been confounded with the preceding, or it would have been better known, as it is not rare either in autumn or spring. It is smaller and more slender than the former, being only five inches long, of which the tail measures two and a quarter; the beak is black above and light brown below; the iris is of a dark chestnut; the feet are nine lines in height and of a dusky flesh-colour; but the plumage in general is similar to that of the female of the preceding species.

The male has the top of the head red, with a grey longitudinal streak in the middle, and many black spots arising from the deeper shade of the feathers which appears in every direction; a dusky reddish white line passes from the nostrils above, and also a little under the eyes, and widening behind on the temples, a chestnut brown colour breaks through a deep black, which reaches the sides of the neck and becomes a spot there.

The colours of the female are in general lighter, and the black does not appear on the top of the head; a reddish white streak passes above the eyes, another descends from the base of the beak down the sides of the neck, a third, but of a dusky black, extends from each side of the chin to beyond the middle of the neck.

When kept in the house the black disappears from the head of the male, and the upper part of the neck becomes greyish white, spotted longitudinally with dusky black.

Observations.—Thick woods and bushes in a mountainous country are the favourite haunts of the sparrow bunting. It is a bird of passage, which quits us in October or November and returns in April. It is not rare in Thuringia, particularly at the time of passage; formerly it was only known in Russia. Its food, when wild, is insects and all kinds of grain.

In the house, it is fed on the same food as the reed bunting, which it very much resembles in its song and habits: it is taken in the same manner.

THE WHIDAH BUNTING

Emberiza paradisea, Linnæus; La Veuve à collier d'or, Buffon; Der Paradiesammer, Bechstein.

This beautiful and rare species is the size of a linnet. Reckoning from the beak to the end of the side tail-feathers, it is five inches and a half in length. The beak is lead-coloured; the iris chestnut; the feet are flesh-coloured; the head, chin, front of the neck, back, wings, and tail are black; the back of the neck pale orange; the breast, thighs, and upper part of the belly are white, the lower part is black; the two intermediate tail-feathers measure four inches, are very broad, and terminate in a long filament; the two that follow, above three inches long, are very broad in the middle, narrower and pointed at the end, from their shaft springs also a filament more than an inch long; the other side feathers are only two inches and a half in length; the two in the middle amongst the longest a little diverging, and arched like a cock's, are glossy, and more brilliant than the others.

The female is entirely brown, almost black, and does not acquire its proper plumage until the third year; whilst young it very much resembles the winter plumage of the male.

This bird moults twice in the year. At the first, which takes place in November, the male loses its long tail for six months, its head is streaked with black and white, the rest of its plumage is a mixture of black and red; at the second, which takes place late in the spring, it resumes its summer dress, such as it has been described above, but the tail-feathers do not attain their full length till July and drop in November.

Observations.—This beautiful species comes from Angola, and other parts of Africa, and is particularly common in the kingdom of Whidah, or Juida, in Guinea, and hence it takes its name. Though it was formerly brought in great numbers into Germany, it still costs there thirty or forty rix dollars. These birds are very lively, and constantly in motion, always waving their long tail up and down, often arranging their feathers and amusing themselves with bathing. Their feeble song, though somewhat melancholy, is however very agreeable. They may be preserved from eight to twelve years if fed on canary seed, millet, barley meal, and the like, not forgetting to add from time to time lettuce, endive, or other green food. They must be given a large cage, to prevent their spoiling their fine tail.

THE DOMINICAN BUNTING.

Emberiza serena, LINNÆUS; La Veuve Dominicaine, BUFFON; Der Dominikanerammer, BECHSTEIN.

THIS species, six inches and three quarters in length, is smaller, more rare, and nearly twice as dear as the preceding. It comes from Africa likewise. The beak is red; the feet grey; the upper part of the head is black, but the top is reddish white, which extends over the whole of the under part of the body, the chin, and temples, and even the under part of the tail; sometimes this tint fades into pure white: the upper part of the neck and the back are black, but the feathers are edged with dusky white; the inner wing coverts being white, give the wings the appearance of being so when folded, but they are black, the quill-feathers alone are edged with white; the tail is also black; the two middle feathers terminate in a point, and are two inches longer than the others, which gradually diminish in length the farther they are from the middle, the three first only have the points white, but the two outer ones have the beard white and the edge pale orange.

The female is entirely brown, and the tail-feathers are of equal length. This species also moults twice in the year: the male loses its tail for six months, and the white of its plumage becomes less pure.

OBSERVATIONS.—This bird requires the same treatment as the former, and sings in the same very agreeable manner.

THE SHAFT-TAILED BUNTING.

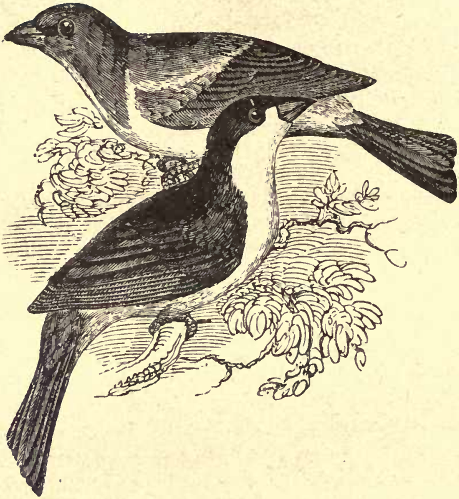
Emberiza regia, LINNÆUS; La Veuve à quatre brins, BUFFON; Der Königsammer, BECHSTEIN.

THIS is also more rare than the Whidah bunting. Its length to the end of the short feathers of the tail is nearly four inches and a half. The beak and feet are red; the upper part of the body black; the sides of the head, the eyes, neck, and under part of the body are orange.

The female is brown, and has no long feathers in the tail. The winter plumage of the male is grey, like the linnet, but rather brighter.

OBSERVATIONS.—This bird comes from Africa, and is not less admired than the preceding.

THE INDIGO BIRD



Emberiza cyanea, LINNÆUS; Fringilla cyanea, WILSON; La Veuve bleue, ou le Ministre, BUFFON; Der Indigo Ammer, BECHSTEIN.

THE length of this bird is five inches. The beak dark lead-coloured; the feet brown; the whole plumage is of the most beautiful blue, deeper and still more brilliant at the top of the head; the great quill-feathers are brown edged with blue; the tail brown, with a pale tint.

The female very much resembles the linnet in its colour, as the male does during moulting, for it is only blue when in full feather; but the male may be distinguished easily at all times by the sides of the wings being of a lighter grey than in the female.

OBSERVATIONS.—This species is most commonly found in Carolina, but is not rare about New York, where it arrives the beginning of April. It frequents the orchards when they are in bloom, and appears to prefer mountainous parts. Its agreeable song, which very much resembles that of the linnet, and the beauty of its plumage, render it a favourite with bird-fanciers. Its food is canary seed, millet, poppy seed, and bruised hemp seed.

THE PAINTED BUNTING.

Emberiza Ciris, LINNÆUS; Le Pape, BUFFON; Der gemahlte Ammer, BECHSTEIN.

THIS bird owes its name to its plumage. It is five inches and a half in length, of which the tail measures two. The beak is greyish brown, the iris nut brown; the feet brown; the head and neck are violet, the circle round the eyes is red; the upper part of the back and the scapulars are yellowish green, the lower part, the rump, and all the under part of the body are of a fine red; the lesser wing-coverts violet brown with a red tinge, the greater of a dull green; the pen-feathers brown, some bordered with grey, others with red; the tail-feathers are also brown, but the two middle ones are of a changeable red, and the outer border of the others is of the same colour.

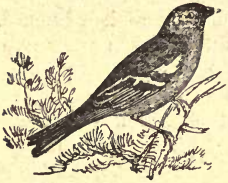
The upper part of the body of the female is of a dull green, the under part yellow green; her pen-feathers are brown edged with green, as are also the tail-feathers.

As the plumage of this bird does not come to perfection before the third year, there must naturally be several varieties. During the first year the male and female are of the same colour; the head of the male does not become a violet blue till the second year, and the rest of its plumage is then a blue green, as are also the edges of the quill and tail-feathers, which are elsewhere brown.

The female at this time is of a fine changeable blue. If to these differences arising from age are added the two moultings which take place every year, we shall not be surprised rarely to meet with two birds alike. There is besides another variety, having the under part of the body yellowish, except a red spot on the breast; and again another, which in the time of moulting is entirely white.

OBSERVATIONS.—These birds are found from the frontiers of Canada to Guiana and Brazil; none, however, are seen in Carolina less than one hundred and thirty miles from the sea. They only show themselves in summer, and build principally on orange or similar trees. English and Dutch sailors take home many of these birds, and it has been said that in England they have succeeded in making them breed in aviaries in gardens, spacious enough to contain orange trees, on which they have constructed their nests. When in a cage they are fed on millet, canary-seed, endive, and poppy-seed, on which they may be preserved from eight to ten years. Their song is soft and agreeable.

THE CHAFFINCH.



Fringilla Cœlebs, LINNÆUS; Le Pinson commun, BUFFON; Der Buch-Fink, BECHSTEIN.

THIS delightful songster of spring, famed for the sprightliness of its warbling,—this favourite of most of our bird-fanciers, is so generally known that I should be tempted to suppress its description if the uniformity of this work and the wish to render it complete, did not impel me to give it. This will also offer some particulars worthy the attention of the naturalist.

The passion for this bird is carried to such an extent in Thuringia, and those which sing well are sought for with so much activity that scarcely a single chaffinch that warbles tolerably can be found throughout the province. As soon as one arrives from a neighbouring country whose notes appear good, all the bird-catchers are after it, and do not give up the pursuit till they have taken it. This is the reason why the chaffinches in this province are so indifferent songsters: the young ones have only bad masters in the old ones, and they in their turn cannot prove better.

This bird is six inches and one-third in length, of which the tail measures two and three quarters. The beak is conical, pointed, and white in winter; but as soon as spring, the season of pairing and song, arrives, and till the time of moulting, it is of a deep blue, and one may know by this whether it has sung or not. The iris is chestnut brown; the legs, nine lines high, are dusky; the claws are very sharp, and grow so fast in a cage that it is necessary to cut them every six weeks, if you do not wish to see the poor bird some day caught by them, and perish miserably unless rescued. The forehead is black, the top of the head and nape of the neck are greyish blue, in very old males deep blue, and then thick downy hairs are perceived.

After moulting, at the beginning of winter, the colours become lighter, the front of the head is only deep brown; the top and the nape of the neck a changeable greyish and olive brown; the red brown of the breast is brighter; this is also the plumage of the young ones in the second year, particularly if of the last brood; they are called grey-heads, by birdcatchers, who can easily distinguish, in the spring, the young from the old males, and very much prefer them, because, if properly caught, they may be taught to improve their song when confined in the house; while the others never learn, or change very little, at least rarely, the song they have acquired in their wild state.

The female is very different, being smaller, while the head, neck, and upper part of the back are greyish brown, and all the under part of the body is a dusky white, rather reddish grey on the breast; and the beak, greyish brown in spring, becomes greyish white in winter.

There are some remarkable varieties of this species, one quite white, another with a white collar, a third streaked, spotted, &c. There is no distinction between the wood chaffinches and those of the gardens and orchards, as has been alleged.

HABITATION.—In its wild state, the chaffinch frequents forests, copses, and orchards, and ought to be reckoned among birds of passage, though there are always some that remain the winter with us. The time of passage, in autumn, continues from the beginning of October to the middle of November, and in spring during the month of March. These birds perform their journey in large flocks. In the spring the males arrive in separate flights, fifteen days before the females; our birdcatchers know this so well, that as soon as they perceive these they put up their implements, their sport being then over.

In the house, though each may vary the form of the cage to his taste, the best, in my opinion, is an oblong cage nine inches long, seven in depth, and seven in height, with the food and water at the two farthest sides, and the perches placed opposite. A bell-shaped cage does not suit the chaffinch, as it prefers jumping down in front, and swinging itself round, to remaining at the top. If there are several in one room they must be placed so as not to see each other, or their song will be injured. Those only are allowed to range whose song is very inferior, and must be provided with a grated place to retire to, or some branches to perch on. These never sing so well as those in cages, their song appearing to require the greatest attention, and hence there should be nothing to distract them.

Food.—When wild, their food in spring is all sorts of insects, which they carry to their young in their beaks; later in the season they eat various kinds of seeds, pine and fir seeds, when they inhabit forests that contain them, linseed, oats, rape, cabbage, and lettuce, which they know well how to procure and shell.

In the house they are fed all the year on rape seed, dried in summer, or, which is better, soaked and swelled in water, on which food they appear to thrive. Every day a sufficient quantity should be soaked for the next, and given them fresh every morning. In the spring they are allowed a little hemp-seed, or the seed of the nettle-hemp (*Galeopsis Tetrahit*), to excite their song, and this plant is therefore very much prized in Thuringia; but these seeds should not be mixed with the rape, as in trying to find them they soon scatter their food; it is best to put it in a separate drawer fastened to the iron wires of the cage, between which it may be slipped. It must not be omitted to supply them with green vegetables, chickweed, lettuce, and the like; and in winter a piece of apple, meal-worms, and ants' eggs agree with them. They must have fresh water regularly every day, both to drink and bathe in.

Those that range the room live on the different sorts of food they meet with, bread, meat, and all sorts of seeds.

Breeding.—The nest of the chaffinch is one of the most beautiful of birds' nests, and formed in the most skilful manner. It is the shape of a half globe flattened on the upper part, and so perfectly rounded that it has the appearance of having been turned on a lathe. Cobwebs * and wool fasten it to the branch, bits of moss with small twigs entwined form the ground-work; the lining is composed of feathers, thistle-down, the hair of horses and other animals, whilst the outer covering is formed of the different lichens that grow on the tree in which it is placed, the whole firmly united and well cemented. This outer finish is no doubt intended to deceive an enemy's eye; in fact, it is very difficult, even with great attention, to distinguish the nest from the bark of the branch on which it is fixed.

The female has two broods in the year; she lays from three to five eggs, of a pale bluish grey, spotted and streaked with brown: the first brood (and this is confirmed in general by observations on other birds) rarely produces any but males, the second only females. Bird-fanciers can distinguish the one from the other before they leave the nest; the breast of the male already discovering a reddish tint, the circle round the eyes being yellower, the wings blacker, and the lines that cross them whiter, though in other respects it resembles its mother. If you wish to be quite sure, pluck some feathers from the breast of the bird you have taken from the nest, in a fortnight they will be replaced, and the presence or absence of red will infallibly decide whether it is male or female. As soon as the tail-feathers begin to appear they must be taken from the nest, to prevent the possibility of their ear being injured by hearing an imperfect song, for scarcely are the wings and tail half grown than these birds begin to warble, and to imitate the song of those around them.

They must be fed on rape seed soaked in water and the crumb of white

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Architecture of Birds," page 265.

bread; it is very easy to rear them and preserve them healthy till the time of moulting, but then numbers perish, particularly if not quickly relieved by being given meal-worms and ants' eggs, or any other animal food, as bread boiled in or soaked in boiled milk.

Chaffinches that have been reared with care become very familiar, and sing at command, or when one approaches their cage in a friendly manner. If they are wished to learn quickly and accurately, they should be kept in an obscure corner of the room, and only hung up at the windows in May: this is the surest way to prevent their learning any thing imperfect. By these means chaffinches that have been taken full grown have forgotten their former song and adopted a better. The whole artifice consists in keeping the bird in such retirement as will remove everything that might distract it when listening to a fine songster, and take away the wish to sing itself.

There have been examples of chaffinches pairing with female canaries, and it has been said with a female yellowhammer. The distinction between wood and garden chaffinches is unfounded, at least as to species; the eggs of both are of the same whitish pink colour.

Diseases.—The disorders to which the chaffinch is most subject are the obstruction of the rump gland * and diarrhœa. To cure this an old nail or a little saffron should be put in the water.

When the scales on the feet become too large, the upper ones must be cut skilfully with a sharp knife, or else the bird would either lose the use of his limbs or become gouty; but this operation must be performed with great care.

Blindness also is not uncommon, particularly where they are fed much on hemp seed. This does not, however, injure their song, and as it comes on gradually, it does not prevent their finding their food and hopping about the perches. By means of proper care a chaffinch may be preserved twenty years.

Mode of Taking.—With good baits the chaffinch may easily be drawn within the area or decoy from Michaelmas to Martinmas, and in spring throughout March. Those that remain the winter, or return early in the year, may be taken in a net baited with oats.

Birdcatchers use in spring lures and lime twigs, and the sport lasts as long as the time of flight, which begins at daybreak and ends at nine o'clock. These birds employ the rest of the day in seeking food in the fields, in resting, and singing. In the same manner are taken linnets, goldfinches, siskins, yellowhammers, and bullfinches.

Some make use of the excessive jealousy of the males to procure those whose song is very superior. As soon as a bird-catcher who likes this way discovers a fine songster wild, he immediately seeks another male that is in the habit of often repeating its natural cry, *fink*, *fink*, ties his wings, and fastens to his tail a little forked stick, half a finger long, well covered with birdlime; thus prepared, he fastens him under the tree on which the one he is watching is perched; this no sooner sees and hears the false rival than he becomes enraged, pounces on him like a bird of prey, and is caught with the birdlime; his attack is often so violent that sometimes the bird of call is killed by the stroke of its adversary. The following is a surer method :—a soft, narrow leather band is fastened round a male, to which is attached a string a foot long, fastened by a peg, which allows it but a short space to range. This bird, as we have already said, is called, in birdcatchers' language, a percher. A circle of bird-lime is made just beyond its reach, and a cage with a chaffinch, accustomed to sing either in the shade or exposed, is placed under a neighbouring bush; as soon as this last begins his song, which should be a natural one, not any learned in confinement, the chaffinch that is to be procured darts from the tree like an arrow on the percher, which it mistakes for the songster, and remains fixed by the birdlime. This new prisoner will sing the same year if it is caught before Whitsuntide : if after, it will never sing, but will die, evidently from grief at being separated from its female and young ones. A birdcatcher, cruel as he is stupid, who, without the least reflection, only thinks of gratifying his ridiculous passion for birdcatching, may in an hour deprive ten or twelve females of their beloved companions, their protectors, and numerous young ones of their father, purveyor, and support : such thoughtless cruelty is, alas ! only too common in Germany. As soon as the young chaffinches have left the nest, the birdcatchers are very active in discovering the places where at noon they are accustomed to drink ; there they set perches covered with birdlime, and by this means many of these little unwary creatures are taken. However little memory one of these birds may have, it is capable of learning a good song, and being more robust than those brought up from the nest, bird-dealers make a good deal of them. They collect a great many, being sure that some will succeed amongst them.

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* The want of a bathing place in the narrow cages where these unhappy prisoners are kept is the true cause of this disease.

Attractive Qualities.—The first of these is undoubtedly the song of the bird; but our amateurs are not less attentive to the different notes that express its passions and wants. The note of tenderness, and which is also thought to indicate a change of weather, is *trif, trif :* its call, or the rallying note it makes use of on its passage, and which so often draws it within the snares of our birdcatchers, is *ïak, ïak*, repeated several times ; the cry *fink, fink*, which it often repeats, and from which its German name is derived, appears, if we may so call it, to be mechanical and involuntary. But what makes it appear to still more advantage among other birds are its clear and trilling tones, that seem almost to approach to words; in fact, its warbling is less a song than a kind of *battement*, to make use of a French word, and is expressed in German by the word *schlag* (trill), which is used to designate its song as well as the nightingale's. Some chaffinches have two, three, four, and even five different *battemens*, each consisting of several strains, and lasting several minutes. This bird is so great a favourite in Germany, that not a single tone of its voice has escaped the experienced ears of our bird-fanciers. They have observed its nicest shades, and are continually endeavouring to improve and perfect it. I confess I am myself one of its warmest admirers ; I have constantly around me the best songsters of its species, and if I liked I could write a good sized volume on all the details of its music, but I will confine myself to that which bears most on this subject

The song of the chaffinch bearing an evident relation to articulate sounds. its has been thought to distinguish its different variations by the final syllable of the last strain. The most admired in Thuringia are the following, which I shall give in their order, and in their different degrees of superiority.*

1. *The Double Trill of the Hartz* in Lower Saxony is composed of six strains, rather long, the last of which is ended by dwelling on the two final syllables, which I shall express here by the word "*weingeh*†." I doubt if ever a bird in its wild state has executed this so perfectly as I heard it at Ruhl‡ and at my own house. Art has certainly created it. It is with difficulty that a chaffinch attains it, if, with the best abilities, it has not been instructed from its earliest youth. Rarely can it give it complete without leaving any part out. On this account a high price must be given for the little prodigy that sings it through, full, entire, and in all its strength.

2. *The Reiterzong*, or rider's pull, first heard among the mineral mountains of Saxony and Voigtland, has been known but a short time in Thuringia. It may be heard from a chaffinch in its wild state, but those that have been instructed execute it in a fuller, stronger, and less precipitate manner. This song consists of four strains, the first of which commences in a high key, and gradually descends. When in perfection there is a cadenced pause before the two last syllables, which articulate tolerably clearly *reitzing* with a *zap* or clapping, as our amateurs express it. An amateur who has never heard the double trill of the Hartz would not believe that a chaffinch could sing in a superior manner to this; however, in this, as in many other things, each has his taste.

3 *The Wine Song* is divided into four kinds, 1. the fine, or Längsfeld wine song §, is very beautiful, but little known except in two or three

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* A good deal of imagination may be supposed to be put forth in the translation of the song of these birds. An Englishman, a Frenchman, or an Italian would discover in it words in their own language which might express very different sounds. We shall not see with less pleasure here details that are entirely omitted in other works on birds. Some will admire, however far it may go, an ear exercised in discovering the shades, niceties, and, in fact, the beauties that delight it, whilst another would be scarcely struck with any difference. Strangers will no longer be surprised at the excessive passion these birds excite where they are studied with so much care. In England they are very little prized, and but seldom kept.—TRANSLATOR.

† Literally, "to go to the wine;" pronounced *vine-gay*.—TRANSLATOR.

‡ Ruhl is a large manufacturing village in Thuringia, the inhabitants of which, mostly cutlers, have such a passion for chaffinches that some have gone ninety miles from home to take with birdlime one of these birds distinguished by its song, and have given one of their cows for a fine songster; from which has arisen their common expression, *such a chaffinch is worth a cow.* A common workman will give a *louis d'or* (sixteen shillings) for a chaffinch he admires, and willingly live on bread and water to gain the money. An amateur cannot hear one that sings in a superior style *the double trill of the Hartz* without being in an ecstasy. I have heard them say that one which sings this melody perfectly certainly can converse, from its pronouncing the syllables so distinctly.—AUTHOR.

§ Längsfeld, where this song was first discovered, is a large town in the district of Fulda, situated a short distance from the Werra, which at Munden takes the name of Weser, after its junction with the Fulda.—AUTHOR.

places in Thuringia. It is composed of four strains, and to be perfect ought to resemble a hautboy, the two last syllables articulating "*weingeh.*" This song has never been heard from a wild chaffinch, but is one accidentally produced in the house, and endeavoured to be propagated by education 2. The bad wine song is not in itself disagreeable, but it is so named when compared with the former. It is composed of three strains, of which the penultimate ought to sound *zap* five times, and the two last syllables articulate "*weingeh.*" When once a wild chaffinch has been heard to utter this in Germany it is not long ere it is caught. 3. The sharp wine song is not ended by "*weingeh,*" but "*weingieh.*" It is subdivided into the common sharp, such as is sometimes heard in the woods, and the Ruhl sharp, which is an entirely artificial song, confined to Ruhl and a few other villages of Thuringia. It has but two strains, of which the first syllables ought to sound as though flowing into each other, and the penultimate to have an accent.

4. *The Bräutigam*, or bridegroom song, is also divided into good and bad: the good is only heard in the house, and consists of two simple strains; it begins *piano*, afterwards *forte*, and, continuing *crescendo*, ends in the most brilliant sound. After the double trill of the Hartz it appears to my ear the finest of all. The bad is occasionally heard in the woods, and is composed of three strains; but though not devoid of sweetness, does not please so much as the former.

5. *The Double Trill* is formed of two long strains, divided by a cadenced pause, which is named the shake. They distinguish, 1. the common, subdivided into four; *a*, the strong, *b*, the clear, *c*, the long, and *d*, the short. These are heard sometimes in the woods and orchards; but chaffinches that sing *a* or *b* soon become the prey of our bird-catchers. 2. The double trill of Iambach*; this is only to be acquired in the house, and is so deep and powerful that one can scarcely conceive how the larynx of so small a bird can produce such sounds. It begins *piano*, and swelling its tones successively in *crescendo*, makes of the *trilling* a strain of five piercing tones, afterwards repeats "*pfaff*" four or five times, and ends by dwelling on "*Rüdidia.*" A chaffinch that possesses this song, either alone, or united with the good bridegroom's song, such as are educated in Iambach, sells here for eighteen French francs.

6. *The Gutjahr*, or good year song, is so named from the two last syllables, and is also divided, 1. into the common, that has but two strains, of which the second ought to roll five times before articulating "*gutjahr.*" It is not uncommon in our woods. 2. The good year of the Hartz, which has been acquired in the house, and consists of two very singular strains, in my opinion not very agreeable. Chaffinches are very rare now which sing this, united to that of the wine song of Ruhl, or the sharp song, and their price is consequently high. They are rarely found but at Ersenach and Ruhl.

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* It is only eight years since this song was accidentally produced. A shoemaker of Iambach had given a chaffinch that sung the double trill five young scholars, one of which struck out for itself this peculiar warbling. From this others were taught, so that amateurs may have the pleasure of hearing at home a song that is now in fashion, and pleases many amateurs.

7. *The Quakia song* is so called from its last syllables, and is double or single, one with one strain, the other with two. This song was formerly very much admired. It was heard in the woods and house, but it is now lost, as all the wild chaffinches that sung it have been taken, and those in confinement have been taught in preference the good wine song: I believe I possess the only bird that is now to be found which sings this. To be admired, the quakia must be united with the double trill. This my chaffinch sings also.

8. *The Pithia* or *Trewethia,* is a very uncommon and agreeable song, which is never heard but in the depths of the Thuringian mountains. The birdcatchers of the villages about the forests of Hesse seek for birds that possess it, and actively pursue the songsters. It is first a sonorous strain, followed by several repetitions of the word "*zack.*" Some birds unite to it the common sharp wine song, and are more valued. The last syllables ought to sound "*trewididæ.*"

These eight varieties, or rather melodies, are those most thought of in Saxony and Hesse. I have said that some of them are heard in the woods; but it is very rarely that they are sung with so clear and strong a voice, or that they are so long and perfect. A chaffinch that knows only one of these varieties generally sings it slowly, and introduces a greater number of syllables. Its voice, in fact, executes it with more strength and depth; if it adds to the last strain the sound "*fink,*" which our birdcatchers translate by *amen*, it is of the highest value, no price will be taken for it.

There are a dozen varieties in all; but as they are not uncommon, and what are everywhere heard, they are less admired; they have even been given in contempt the name of *plain.*

One thing worth remarking is that the song of the chaffinch varies almost as much as the countries it inhabits. It is not the same in Thuringia as in the Hartz, and the taste of amateurs differs equally *. In Austria several named melodies are admired, but I have never heard them.

The chaffinch has so great a facility in learning, that it not only imitates perfectly the song of another chaffinch near which it has been placed from youth, but being hung near a nightingale or canary it learns several parts of their songs, and would no doubt give them completely if its larynx were so formed that it could render notes so long and sustained; in fine, a great difference in memory is observed in these birds, as well as in all others of the singing species. Some require six months to learn an air that others catch on first hearing, and can repeat almost immediately; these can scarcely retain one of the songs given above; those can imitate three, four, and, should you wish it, five different ones. There are also some that cannot give one song without a fault, and we find others that will add to it, perfect it, and embellish it.

One thing peculiar to chaffinches is the necessity of teaching them their song every year, and this in the manner proper for them, during the four or five weeks this exercise lasts. They first utter a murmur, or weak warbling, to which they add at first, in an under voice, one or two, and afterwards several syllables of their song; they are then said to *record.* A chaffinch that takes only a week or fortnight to repeat this lesson for fully bringing out its voice, is reckoned among the geniuses of its species. It is known that other birds whose power of singing is confined to a particular season, also warble feebly, and mingle with their warbling some foreign notes, especially harsh and confused sounds; but none produce sounds so peculiar, and that have so little relation to their own song. If we pay a little attention, however, we shall find that this exercise is intended less to awaken the memory than to render the throat, stiffened by a tolerably long state of inaction, more pliant, and to bring back its natural flexibility.

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* The notes of the wild chaffinches in this country are finer than any cage ones I have heard in Germany.—TRANSLATOR.

Wild chaffinches, on their return in spring, do not delay to record; those in the house soon learn, but they are obliged to exercise themselves for nearly two months before they can execute their song to perfection. The singing season does not generally extend beyond June, but young chaffinches brought up in a room prolong it to October, and sometimes later.

Some amateurs of the song, rather than friends of the bird, to procure the pleasure of hearing it night and day in all its strength, employ a very cruel and inhuman contrivance. They first place the cage in a very obscure place, and accustom the poor little creature to find its food in the dark; they then blind it, either by destroying the pupils of the eyes with a red hot iron wire, or by passing it over the edges of the eyelids, unite and paste them completely together.

Others shut up these poor mutilated creatures in a cool place, almost without air, during the summer, in order that when in autumn they are brought to the window, and breathe the fresh air, they may express their joy by their lively and repeated song. What can we think of the heart and morals of people who for a slight amusement thus enjoy the sufferings of a sensitive being that is unfortunately in their power?

THE MOUNTAIN FINCH.

Fringilla montifringilla, LINNÆUS; Le Pinson d'Ardenne, BUFFON; Der Bergfink, BECHSTEIN.

THIS bird is six inches and a quarter in length, of which the tail measures two and a half and the beak half an inch; this is yellow, with a black tip. The feet, nine lines high, are dark flesh-coloured; all the feathers of the head and cheeks are black with reddish edges, wider and more distinct in young males, and becoming fainter from age, almost disappear in old ones, whose heads become quite black; the tail rather forked, and black.

The colours of the female are more uniform; she is brown where the male is black, and only a rusty colour where he is red.

Independently of the varieties produced by age, and which are tolerably numerous, without being very remarkable, there are some more remarked, such as those with a white head, a back quite white, &c.

Habitation.—In their wild state this species is scattered throughout Europe; however, it is most probable that in the summer they only inhabit the northern parts. During the three other seasons they are found everywhere in Germany, particularly where there are large forests. When beech-mast is plentiful in Thuringia the mountain finches assemble in immense numbers, it is supposed more than 100,000.

In the house they are kept in a cage or not, according as they are esteemed; where they are common they are not thought worthy of one, but allowed to range at will.

Food.—Wild, and in confinement, it is the same as the chaffinch's.

Mode of Taking.—This bird's note of call is *ïak, ïak, quäăk*, and as the two first sounds are the same as that of the chaffinch, they will come at its call, and fly in its company. They also afford the best sport with a net, for in autumn hundreds may be taken at one cast. In winter they are caught near barns under nets, or even under common sieves; and in spring on a decoy bush, at the call of the chaffinch, if one of its own species cannot be procured.

Attractive Qualities.—We cannot boast of sweetness in the song of this bird, as it consists of low whistling, or a kind of warbling, intermixed at intervals with a shrill "*raitch*," the whole somewhat resembling the first exercises of the chaffinch; but this wretched warbling may be improved by education. A mountain finch placed by the side of a chaffinch that sung well, learnt to imitate it tolerably, but I must confess that it never attained great perfection. I should warn bird-fanciers who wish to keep these birds for the beauty of their plumage, not to let them range with many companions, for they are quarrelsome, and very lavish in distributing severe pecks, especially if food is not very abundant. In Thuringia they are kept in cages to be employed as lures in the area or decoy enclosure. It is said that it is easier to teach them to go and come than the chaffinch.

THE HOUSE SPARROW.

Passer domestica, Ray; Le Moineau franc, Buffon; Der Haussperling, Bechstein.

Though this and the following species cannot be reckoned among those that are pleasant in a room, yet I must not omit them on account of their being easily preserved, and though distinguished neither for their song nor their colours, yet they make up for the want of these by agreeable qualities, that many, much more admired, do not possess.

It is almost superfluous to describe a species so well known. The total length is five inches and three quarters; the beak thick and blue black; the feet greyish brown; the top of the head and cheeks greyish ash-coloured with a broad chestnut streak behind the eyes, elsewhere surrounded with black.

The female differs a good deal, the upper part of the body being greyish red, spotted with black on the back, and the under part of a dusky greyish white.

The young males before their first moulting very much resemble their mothers.

The varieties known here are the white, the yellow, the tawny, the black, the blue, the ash-coloured, and the streaked.

HABITATION.—In its wild state, it haunts the vicinity of houses; when confined, it is allowed to range the room.

FOOD.—If, unfortunately, it is too true that the sparrows cause great injury in ripe fields of wheat, barley, and peas, it must be acknowledged that they are very useful in our orchards and gardens, by destroying, in the spring, thousands of insects, on which they feed their young ones as well as themselves *. In the house, they feed on any kind of food: oats, hemp seed, or rape seed.

BREEDING.—Small openings under the tiles, crevices in walls, empty martin's nests, are the places they appropriate for breeding, and they line their nest thickly with feathers. The female has two or three broods every season, and has from five to seven young ones at a time.

MODE OF TAKING.—Sparrows are so cunning that it is difficult to attract them within the net or on lime twigs. They may bo caught in numbers however on the brambles in a field where sheep are kept, by sticking plenty of birdlime about them. They may be taken also by placing a net before those that have retired to cherry trees and under the tiles to sleep for the night.

ATTRACTIVE QUALITIES.—The bird-fancier who enjoys seeing several birds running about the room, will, with pleasure, admit the sparrow among them, and may amuse himself especially by observing it breed and produce mules with the hen tree-sparrow. A jar or cup placed in a corner will serve as their nuptial bed. A male tree-sparrow with a hen sparrow does not succeed.

The sparrow may be easily taught to go and come at command, by choosing winter as the time to effect it. It is necessary first to keep it a month near the window in a large cage supplied with the best food, such as millet, meal, or white bread soaked in milk. It will even go there to deposit its eggs if a small box is placed in the cage, with an opening for it to enter

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* The destruction of the sparrows has been so great an evil in the countries where the government had ordered it, that it has been found necessary to rescind the order. The injury they do to the corn is something certainly, but it may be exaggerated besides,ought not these useful creatures to be paid ?—TRANSLATOR.

at. Finally, no bird becomes more familiar, or testifies more attachment to its master. Its actions are very lively, confiding, and delicate. A soldier, says Buffon, had a sparrow which followed him every where, and knew him in the midst of the regiment.

THE TREE SPARROW, LATH.

Passer montana, RAY; Friquet, ou Moineau des haies, BUFFON; Der Feldsperling, BECHSTEIN.

THIS species is more beautiful than the preceding. In length it is five inches and a half; the beak is dusky; the feet are bluish flesh-coloured; the upper part of the head as far as the nape of the neck is reddish brown; the cheeks are white with a black spot; a white ring surrounds the neck; the back is spotted with black and red; the lower part of the back and the rump are grey brown; the throat white, the breast light ash-coloured; the belly dusky white; the quill feathers and tail are dark brown; the lesser wing-coverts rust-red; the greater, black with red edges and white tips, which form two transverse bars.

Two varieties are known, the white and streaked.

HABITATION.—In their wild state, they are not only found throughout Europe, but also in the north of Asia and America. In Germany and England it is not so common as the house sparrow, for in some provinces it is never seen. It frequents gardens, orchards, and fields abounding with trees and hedges. In September, large flights are seen to fall upon the ripe fields of barley and oats.

In the house it is let run about like the former, which it does very awkwardly from having short legs, and this gives it the appearance of dragging along on its belly. It is only kept in a cage in countries where it is very rare.

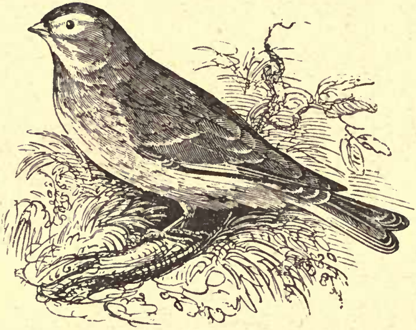
FOOD.—This is the same as that of the preceding.

BREEDING.—The nest must be sought in the holes of fruit trees, or in hollow willows at the water's edge; it breeds twice in the year.

MODE OF TAKING.—This is the same as the preceding; but being less distrustful and cunning, it is easily enticed under a sieve placed before a barn in winter.

ATTRACTIVE QUALITIES.—Its plumage is prettier than the preceding, its song is also less short and monotonous; but it is weak, and when it might be sweet, it is lost among the other songs in the room. The tree sparrow might be accustomed in the country to go and come at command by treating it in the manner described with respect to the house sparrow. It is more difficult to preserve it, and it generally dies of decline.

THE COMMON LINNET.



Fringilla cannabina, LINNÆUS ; La Linotte, BUFFON ; Der Lanning, BECHSTEIN

THE length of this well-known bird is more than five inches, of which the tail measures two inches and a half. The beak, six lines long, is dusky blue in summer, and in winter greyish white, with the point brown; the iris dark brown; the feet, eight lines high, are black. There are some very striking varieties produced by the season and age in the plumage of the male, which are not observed in the female, and these have caused great confusion in works on birds, so much, that bird-catchers are still persuaded these birds, in a different dress, are distinct species

Instructed by long experience and the observations of many years, I hope to show in my description that our common linnet (*Fringilla Linota*, Linnæus), the greater redpole (*Fringilla cannabina*, Linnæus), and, according to all appearance, the mountain linnet (*Fringilla montana*, Linnæus), are one and the same species. A male three years old or less, is distinguished in spring by the following colours, and by the name of redpole. The forehead is blood red, the rest of the head reddish ash-coloured, the top rather spotted with black; the cheek, sides of the neck, and the circle round the eyes, have a reddish white tint; the feathers of the back are chestnut with the edges lighter; the upper tail-coverts are black edged with reddish white; the throat and under part of the neck are yellowish white, with some dashes of reddish grey; the sides of the breast are blood red edged with reddish white, the sides of the belly are pale rust-coloured; the rest of the under part of the body is reddish white; the greater wing coverts are black, bordered with reddish white, the others are rusty brown with a lighter border. The quill-feathers are black tipped with white, the first are edged with white nearly to the point, the narrow beard forms a parallel white streak to the quill-feathers; the tail is black and forked, the four outer feathers on both sides have a broad white border, that of the two middle feathers is narrower, and reddish white.

After moulting, in autumn, little red is seen on the forehead, because the feathers become coloured from the bottom to the top; the breast has not yet acquired its red tint, for the white border is still too wide; but when winter comes its colours appear.

Males one year old have no red on the head, and more dashes of black: the breast is pale red waved with pale and dark, the under part of the feathers on the breast is only a bright reddish grey brown, the edges of these feathers are of a reddish white; the back rust-colour has some detached spots of dark brown and reddish white. These birds are known under the name of grey linnets.

After the second moulting, if the reddish grey feathers are blown aside, blood red specks may be discovered on the forehead, and the red of the breast is only hidden by the wide yellowish white borders to the feathers; these are the yellow linnets, or the rock linnets, as they are called in Thuringia.

I have myself taken linnets whose foreheads and breasts have been bright reddish yellow instead of blood red, a colour, in fact, that sometimes, in the house, becomes blood red. Bird-catchers give these also the name of yellow linnets. It is a deterioration of the red caused by illness during moulting, or by old age, and they are not wrong in regarding them as the best and the finest singers. I have taken several, but on account of their scarcity, I have always kept them for myself. Their song was very fine and clear, but they cannot be tamed, and have generally died soon of sorrow and melancholy, from which I conclude that they were very old.

Besides these three different varieties of plumage of the males, there are several clouded, produced by the seasons and old age; for instance, the older they become, the redder the head is. I have in my cabinet all the gradations of this change. Birds brought up in the house never acquire the fine red on the forehead and breast, but remain grey like the males of one year old; on the other hand, old ones, red when brought into the house, lose their beautiful colours at the first moulting, and remaining grey like the young ones, are no more than grey linnets.

This difference of colour does not take place in the females, which are smaller than the males; the upper part of the body is grey streaked with dusky brown and yellowish white, on the rump with greyish brown and reddish white; these spots are more numerous on the breast; the wing-coverts are a dusky chestnut. The females are distinguished in the nest by the back being more grey than brown, and by the number of streaks on the breast, which resembles that of the lark; bird-fanciers leave these in the nest and take only the males.

Habitation.—In its wild state the linnets are spread throughout Europe. In the summer they frequent the skirts of large forests, thickets, hedges, and bushes, particularly furze; but as soon as September arrives, they pass in large flights to the fields. They are wandering birds, that in winter go hither and thither seeking food in places free from snow, but in March they return to their native places.

In confinement it is best to keep them in square cages, as they are less subject to giddiness in these than in round ones, and sing better. They are not often allowed to range the room, as they are very indolent, remaining immoveable in the same place, and running the risk of being trodden on; but if a small tree or a roost be placed in a corner, they may be let out of the cage with safety, as they will remain perched there, only leaving it to eat or drink, and will sing all day long.

Food.—When wild, their food is all kinds of seeds that they can shell, and these remain in the crop some time to be moistened before passing into the stomach. In the house, it is only summer rape seed,* which need not be soaked in water for them, as for the chaffinch, since, having a much stronger crop and stomach, they can digest much better. It is not necessary always to give them hemp seed with it, and they must not be fed abundantly, for taking little exercise, they easily become fat, and sometimes die from this cause; but a little salt mixed with their food is useful, as it preserves them from many diseases, and they like it. When linnets are allowed to run about, they will feed with the other birds on the common universal paste; but they must be given green vegetables, water, and sand, as they are very fond of bathing and dusting themselves.

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* It is known from experience that winter rape seed, which is not hurtful to them in a wild state, will soon kill them if they are fed on it in the house.—Author.

Breeding.—Linnets have two broods in the year. They lay from four to six eggs for each, of a bluish white, speckled with reddish brown, especially at the large end. Their nest placed in a hedge, a white or black-thorn, or, if in a country where they are common, on a vine, or a furze bush, is composed of small twigs, dried grass and moss, and lined with wool, the hair of horses, and other animals. The parent birds feed their young ones from their beaks, and do not discontinue it if prisoners in the same cage. If the young ones are to be taught a new song, they must be taken from the nest when the shafts of the feathers are just appearing, that they may have no idea of their parents' song. The males may be easily distinguished by their white collar, and from having the most white about the wings and tail.

Diseases.—The most common disorders of this species are constipation, atrophy, and epilepsy. A linnet, however, will, in general, live from ten to twelve years in the house.

Mode of Taking.—These birds are distrustful and suspicious, and, notwithstanding decoys and perching birds, it is very difficult to entice them within the decoy or area, and never many together. In the spring, by means of a good decoy-bird, a few may be taken on a decoy-bush. In the autumn, by fastening snares or lime twigs to the stalks of lettuces, of the seeds of which the linnets are very fond, several may be taken. Our shepherds turn and support the cribs, used to feed the sheep from, in such a manner, that the linnets, coming to gather the grains of salt, easily overturn them on themselves. The call of the linnet is "*gäcker.*"

Attractive Qualities.—The agreeable, brilliant, and flute-like song of the linnet, consists of several strains, succeeding each other very harmoniously. Our amateurs consider its beauty to depend on there being often mingled with it some acute and sonorous tones, that a little resemble the crowing of a cock, and have made people say that this bird *crows.* Its song is only interrupted during the year by moulting. A young one taken from the nest, which may be easily brought up on a mixture of the wetted crumb of white bread, soaked rape seed, and eggs boiled hard, not only learns the songs of different birds that it hears in the room, such as nightingales, larks, and chaffinches, but if kept by itself, airs and melodies that are whistled to it, and will even learn to repeat some words. Of all house birds, this, from the softness and flute-like sound of its voice, gives the airs that it is taught in the neatest and most agreeable manner. It is also one of those that pay best; some here cost from three to five rix-dollars when they can warble an air preceded and followed by a grand flourish as of trumpets. The weavers and shoemakers often bring up many of these birds. It is very pleasing and surprising to hear a young linnet that is well taught by a nightingale. I have one, whose imitations are as perfect as possible. It amuses me throughout the year, but especially when my nightingales are silent.

Linnets may be accustomed to go and come at command, by treating them in their youth, or in the winter, as I have directed for the house-sparrow; but as they are more timid, it is necessary to be more careful.

It is common for a male linnet to pair with a hen canary, and their progeny can scarcely be distinguished from the grey canary. They sing delightfully, and learn different airs with great facility.

It is well known, that among linnets, some are finer warblers than others, and that, as with many other birds, the old ones sing better than the young; on which account, yellow linnets, being the oldest, are the most valued.

THE LESSER REDPOLE.

Fringilla Linaria, LINNÆUS; Le Sizerin, ou Petite Linotte des Vignes, BUFFON: Der Flachsfink, BECHSTEIN.

In its plumage this bird resembles the linnet; but in its actions and shape it more resembles the siskin. It is five inches and one quarter in length, of which the tail measures two and one quarter; the beak, four lines long, is very sharp and yellow; its shanks, eight lines high, are black; the top of the head is a brilliant crimson; the upper part of the body is dark brown, spotted with white and rust yellow; the rump is rose-coloured; the throat black; the feathers on the under part of the neck and breast are bright rose-coloured, edged with white; the rest of the under part is white. The plumage of the female is lighter; the breast is not rose-coloured, except that when very old it acquires a slight tint, as well as the rump; the upper part of the body is spotted with white and deep brown, and the breast is rather speckled with the same colours. The latter characteristics serve to distinguish the females from young males, that also are without the rose-colour on the breast, but have the rust-coloured and dark brown back of the older birds. The males, confined to the house, lose, at the first moulting, the fine rose-coloured breast, and, at the second, the crimson of the head, which generally changes to a greenish yellow. I have a male bird, the top of whose head became, at the third moulting, of a fine golden yellow, and has retained its brilliancy for six years.

Habitation.—In its wild state the lesser redpole is found in every part of Europe; yet we must consider the north as its native home, Scotland, Sweden, Lapland, Norway, and Greenland. Great flights arrive amongst us at the end of October, and leave us in March and April. In winter, they frequent places planted with alders, the seeds of which they appear very fond of. They are principally found in company with siskins.

In the house, it shows off its beautiful plumage, which, alas! does not retain that beauty long, it is often placed in a pretty cage, but most commonly allowed to range through a room.

Food.—When at liberty, the seed of the alder is what these birds seek most eagerly; but they do not despise the seeds of flax, hemp, and even fir, and many other kinds. Being entirely grain-eating birds, their crop has the power of softening the food before it passes into the stomach.

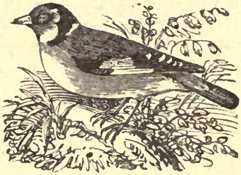
In the house, if in a cage, they eat poppy, rape, and hemp seed; when at large, the first universal paste.

Breeding.—Occasionally a few stragglers breed with us, but this is rare.

Diseases.—The disorders of this species are the same as those of the siskin but their feet are oftener diseased, and the toes skin off one after the other. They may be kept from eight to ten years.

Mode of Taking.—In the spring and autumn, the lesser redpoles may be taken in flocks in the area, or barn-floor trap, with a decoy of their own species, or even with a siskin. Many may also be caught with such a decoy on a decoy-bush. They are so silly, or so confiding, that they will even allow themselves to be taken close by the bird-catcher, who is collecting their entrapped companions. This stupidity, or simplicity, is common in all birds that come from the more remote northern parts. Brought up far from man, and out of reach of his pursuit, they know not that fear and distrust which is felt by those that inhabit populous countries. Their call is "*peweet*" and "*crec, creck hewid.*"

Attractive Qualities.—The lesser redpole pleases the eye more than the ear; its feeble warbling being only, if I may thus express it, a low continued clicking. It may be taught to draw water more easily than the goldfinch, and it will also learn many other little manœuvres, for it becomes very familiar, and will eat as soon as it is let loose after its capture. The mutual tenderness of the male and female is very pleasing. They are continually caressing each other with their bills, and even do the same to siskins, linnets, goldfinches, and canaries, from which it appears very likely that they would pair with these birds.



THE GOLDFINCH.

Fringilla Carduelis, LINNÆUS; Le Chardonneret, BUFFON; Der Distelfink, BECHSTEIN.

"BEAUTY of plumage," says Buffon, "softness of voice, quickness of instinct, remarkable cleverness, proved docility, tender affection, are all united in this delightful little bird; and if it were rare, or if it came from a foreign country, it would then be valued as it deserves." It is five inches and three quarters in length, of which the tail measures two. The beak, five lines long, very pointed, and rather flattish at the sides, is whitish, with the point horn-coloured. The shanks, six lines high, are delicate and brownish. The front of the head is a fine crimson, sometimes scarlet; a wide border of the same colour surrounds the under base of the beak; the bridle, as it is called, is black; the top of the head is black, which colour extends downwards, from the nape on each side, dividing the white on the cheeks from the white spot on the hinder part of the neck; the under part of the neck is white; the hinder part and the back are fine brown.

The female is rather smaller, and has not so much red round the bill; the bridle is brownish; the cheeks are mixed with light brown; the lesser wing coverts are brown; the back dark brown. The size, or the want of some white spots at the tips of the feathers, do not serve to distinguished the male from the female, as some bird-catchers say; nor ought we either to imagine that the size or number of these spots constitute different varieties; for all these distinctions are accidental, and depend on physical strength and age. Our bird-catchers think the large ones that are nearly the shape of the greater redpole form a distinct species, and they give them the name of Fir Goldfinches, because they say they always build in fir forests. Those that do not exceed the size of the redbreast, they call Orchard Goldfinches, because they suppose they always bui in orchards. But these differences and pretences are imaginary, because both are found of different sizes, the orchard goldfinch large, and the fir, or wood goldfinch, quite small. The young ones that are hatched first are always stronger and larger than those hatched last, because they often carry off the food intended for the latter, and, therefore, being better fed, they become larger and stronger. This is sufficient to explain the difference of size in different individuals of the same species.

The following varieties are better established:—1. The goldfinch, with a yellow breast; 2. With a white head; 3. With the head black—four young ones of this variety were found in the same nest; 4. The white goldfinch; 5. And the black goldfinch, this being either entirely black, which often happens in a cage, from giving it too much hemp seed, or from old age; or it only retains the yellow spot on the wings, which is also occasioned by captivity. M. Schilbach, superintendant of the menagerie of Cassel, tried an experiment on a whole brood. He deprived the birds of the light of the sun, even covered the cage with a piece of cloth, and, by these means, obtained very black goldfinches, with only the yellow spot on the wings; but they changed colour after moulting. Those in which the black does not change are very old. It is, in fact, a sign of approaching death.

Habitation.—In their wild state goldfinches are found in all parts of Europe, frequenting orchards, brambles, thickets, and mountainous districts, interspersed with wood and fields, during the summer. These birds are stationary, not changing their haunts in winter; they merely assemble in the autumn in families, or rather in little flocks of fifteen or twenty, seeking here and there places abounding in thistles, and only when the snow becomes too deep leaving such localities for others more accessible.

In the house, if kept in a cage, this should be a square one, because these birds do not like hopping about the upper part, as they would be forced to do, if in a bell-shaped cage, and also inclined to swing round. When they run on the floor they should be given a small artificial tree for a roost; for they like to perch on this whilst singing as well as sleeping.

Food.—Their food, when wild, consists of all kinds of small seeds, such as lettuce, goats'-beard, scorzonera, thistle, radish, and canary seed.

With us, in the house, they are principally fed on poppy, hemp seed, properly varied with lettuce, rape, and canary seed. If allowed to range, the second universal paste agrees very well with them. I have a goldfinch, which appears in good health, and eats not only of all the vegetables brought to table, but also meat, though, in their wild state, these birds never touch insects [*]. They must have green food occasionally, such as chick-weed, water-cresses, lettuce, or endive. These birds feed largely, when loose in the room, rarely leaving the food-dish, and driving off, if they can, with loud cries, any of their companions who wish to approach. They will allow those birds, however, to feed peaceably with them, that bear some analogy to their species, at least, in the nature of the stomach, such as the canary, siskin, and especially the lesser redpole, without distinction of male or female.

Breeding.—The goldfinch prefers building in large orchards, at the tops of trees, on weak and terminal branches. It makes the most beautiful nest of any of our birds, except the chaffinch, it being finely rounded, very elegant and firm. The outer part is constructed of fine moss, lichens, stalks of grass, and slender twigs; the whole being interwoven with the greatest nicety. The interior is lined with wool, horse-hair, and the cotton or down of the thistle [†], or willow. The female has rarely more than one brood in the year, unless she has been disturbed, and, in this case, the number of eggs is always diminished; on this account goldfinches never appear to increase in number. On a sea-green ground, the eggs have pale red spots and speckles, mingled with streaks of reddish black, which often form a circle at the large end. The parent birds disgorge the food into the young ones' throats. Before the first moulting the heads of the young birds are grey. If it is only wished to take male birds from the nest, all that have a whitish ring round the root of the beak, must be left. They must be brought up on poppy-seed and the crumb of white bread, soaked in milk or water. Of all the natural songs of birds, they imitate most easily and perfectly that of the canary; they also pair with the canary, and produce together fruitful young ones. For this purpose, a male goldfinch is paired with one or two female canaries, which succeeds better than by placing a male canary with a female goldfinch; the former being more amorous, most favours this union, particularly if educated from youth. The fruit of this union are not less distinguished for the beauty of their plumage, often yellow, with the head, wings, and tail, of the goldfinch, than for the sweetness of their song, whether natural or acquired.

If you are afraid that a pair of canaries you value, may not hatch their eggs as you wish, place them in the nest of a goldfinch in your orchard, and you may be certain that they will be properly matured, and the young ones brought up in the best manner. When they are ready to fly, place them in a cage, and suspend it by the side of the nest till they can feed themselves. By this means you will have no trouble with their education.

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[*] We read in Buffon, that the Goldfinch feeds its young with caterpillars; this is not natural to the species, since we find farther on, that the parent birds disgorge the food into the crop of their little ones, and do not merely place it in the beak as those birds do that feed their young on caterpillars and other insects.—Translator.

[†] This is a mistake. See Architecture of Birds, p. 268.

Diseases.—Epilepsy is one of the commonest disorders of this bird. If the eyes are weak and swollen, anoint them with fresh butter. Stupor and giddiness being very properly attributed to too great a use of hemp seed, it is best to suppress it entirely, and supply its place with the seed of lettuce and thistles. This latter is so beneficial, that it would be well to give them, from time to time, a head to pluck the seeds for themselves.

Old age makes them blind, and deprives them of their beautiful colours; yet, notwithstanding all the evils with which they are afflicted, in a cage a goldfinch has been known to live sixteen years, and even twenty, or twenty-four years.

Mode of Taking.—In spring these birds are taken on a lure bush, with a decoy bird of their own species. They will also enter the area, or barn-floor trap, with chaffinches, if bundles of thistles are placed there; but it is not without difficulty, for they are very watchful to avoid nets and lime-twigs. In the winter, by building up bundles of thistles, and placing snares and traps on them, several may be caught; but in autumn and spring lime-twigs should be placed on them in preference. It is a still better plan to place bundles of thistles in a tree stuck about with lime-twigs. The goldfinch's call is "*tziflit*," or "*sticlit*," which is its name in Bohemia.

Attractive Qualities.—The goldfinch is a very beautiful, lively, active bird, always in motion, and turning continually to the right and left. Its agreeable song, which is only discontinued during moulting, is a mixture of tones and harmonies, more or less dwelt upon, and the oftener the sound "*fink*" is introduced the more it is admired amongst us. There are some goldfinches that utter it only once or twice in their strains, whilst others will repeat it four or five times following. This species learn with difficulty to repeat airs from the flageolet, or other birds' songs, and in this respect is inferior to canaries and linnets; but it is remarkable for its docility. Goldfinches have been seen to let off a small cannon, and imitate death. When properly instructed they will draw up their food and water. They are taught this by means of a chain or pulley, furnished with a soft leather band, two lines wide, pierced with four holes, through which the wings and feet are to be passed; the two ends meeting under the belly, and are retained there by a ring, to which is fastened the chain that supports the bucket containing the water or food. Whenever the little waterman wants either, he draws up the chain with his beak, fixing it at intervals with his foot, and thus succeeds in obtaining what he wishes; but if his little buckets are suspended to a pulley, raising one makes the other descend, and he can only enjoy his food and water in turn.

I have also seen goldfinches and siskins, placed in different cages, that have little bells fixed to the seed drawer in such a way that the bird cannot take its food without ringing them; the bells being harmonised, tolerably agreeable chimes are produced, but one is soon tired of such trifles.

The goldfinch is taught to go and come at command, without any danger of losing it, much sooner than the linnet, though the latter learns quite as soon to build in the room. To accomplish this feat the winter should be chosen, and the cage, containing a goldfinch that has not been rendered tender by having been too long accustomed to the heat of the room, must be placed on the outside of the window every day, or on a shelf intended for it, and where the mice cannot reach it. Hemp seed must be scattered round, and a bunch of thistle heads fastened by the side, the seeds of which should be mixed with the hemp seed. Presently one or more goldfinches, attracted by the call of the prisoner, collect, to take advantage of the scattered food; as soon as you have succeeded so far it is useless to let the decoy remain any longer exposed to the cold, which may injure it. It will be quite sufficient to place the cage within the window, and to put on the outside a cage as a trap, not for the sake of catching these birds, but to scare away the sparrows, that would soon eat up all the seed unless thus prevented; and in order that the trap may only close when you wish, the door should be supported by a string, passing into the room, and loosened, to catch the sparrows, but the goldfinches should be allowed to go in and out at pleasure, till the snow is on the point of disappearing, then close the trap on those you wish to keep: the birds thus captured should be placed in a cage, where they will soon grow tame, and learn to go and return to it. Whatever form this cage is of, the door should be hung so as to remain open as long as is required, and be closed without noise or alarming the bird, either by means of a spring, that may be acted on by the bird, without his perceiving it, or by his pushing the door of it open on the inside. When a goldfinch has been thus trained it may be let fly without fear the following August, at the time of moulting. It is true that it will be lost for some time, but it will not fail to return in December, when the ground is covered with snow, and it will sing much more sweetly than it would had it been kept prisoner. As soon as it has flown, a cage should constantly be hung outside the window, and seeds placed in it, that, if it should chance to return, it may find food; but it is rarely seen again till winter: at that time the cage should be so arranged that the door may be closed as soon as the bird enters, as it used to do in the room; the surest way is to attract it by a call bird. It must not be allowed to come out so often as before, and it will remain, without injury, shut up till the season arrives for giving it its liberty again. The same course may be pursued for the tit, and with still more success for the chaffinch, which does not enter the snares of the bird-catcher as easily as the others. If it is feared that it may be caught in a neighbouring area or barn-floor trap, it may be frightened from this snare in future, by stretching a net once, in the orchard or garden near. The greenfinch is the best for this manœuvre, as it is extremely fond of hemp seed, is more rarely taken, and returns less wild than the chaffinch. The birds that enjoy their liberty in the summer sing more finely than without this advantage, and, what is almost incredible, though taken to a distance of several leagues, they have always found their master's house again *.

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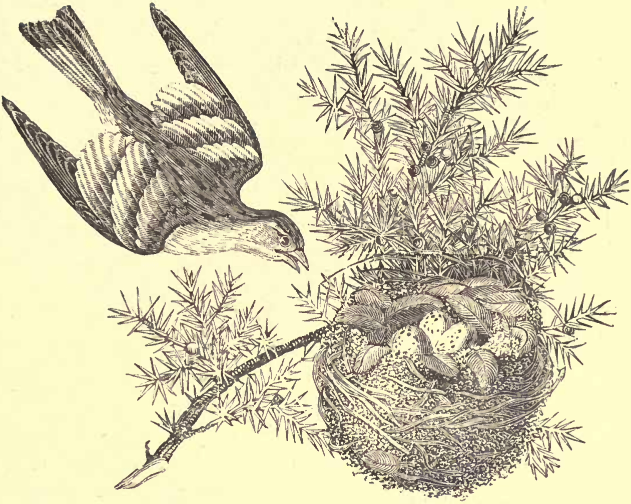
* After having shown the skill and docility of the goldfinch, we cannot end our praise of the bird better than by giving an instance of his attachment. Mad. ——— had one that never saw her go out without making every effort in his power to quit his cage and follow her, and welcomed her return with every mark of extreme delight; as soon as she approached, a thousand little actions showed his pleasure and satisfaction: if she presented her finger, he caressed it a long time, uttering a low joyous murmur. This attachment was so exclusive that if his mistress, to prove it, substituted another person's finger for her own, he would peck it sharply, whilst one of his mistress's, placed between two of this person's, would be immediately distinguished, and caressed accordingly.—TRANSLATOR.



THE SISKIN.

Fringilla Spinus, Linnæus; Le Tarin, Buffon; Der Zeisig, Bechstein.

This bird is four inches and three quarters in length, of which the tail measures one and three quarters. The beak, four lines long, becomes narrower towards the tip, which is very sharp and brown; the rest is light grey, and in winter white. The shanks, eight lines in height, are dusky; the top of the head and throat are black; the cheeks, the back of the neck, and back are green; the latter streaked with a dusky colour; the rump, breast, under part of the neck, and the line that passes over the eyes, are greenish yellow.

The throat of the male rarely becomes black till the second year; the older it becomes the more of yellow and beauty it attains.

The varieties are the black siskin, the white siskin, and the speckled siskin. I have occasionally killed these birds with a breast entirely black.

Habitation.—In its wild state it is found throughout Europe; it is very common in Germany, where it remains all the year *, but in winter it wanders about in search of food, and most frequents the parts well planted with alders. In the house, whether in a cage or not, it soon becomes very familiar.

Food.—When wild it varies according to the season; in summer it eats in the woods the seeds of the pine and fir; in autumn, of hops, thistles, burdock; in winter, of the alder and the buds of trees.

In the house its food is poppy-seed and a little hemp-seed bruised. If allowed to range, the first universal paste suits it. It is a complete glutton, and, though so small, eats more than the chaffinch; it is at the seed drawer from morning till night, constantly eating, and driving off all its companions. It does not drink less, and requires abundance of fresh water; yet it bathes but little, only plunging the beak in the water, and thus scattering it over its feathers, but it is very assiduous in arranging them; it may be called a fop, always engaged with finery.

Breeding.—The siskin rarely builds its nest among the alders, but generally in the pine forests, placing it at the extremity of the highest branches, and fixing it there with cobwebs, the threads of insects and lichens. The outer part is well formed of small twigs, and the lining is formed of finely divided roots. It has two broods in the year, each of five or six eggs, of a light grey, strongly spotted with purplish brown, particularly at the large end. The young males become finer each year till the fourth.

The mules, produced by the siskin pairing with the canary, partake of the two species, and are very prettily spotted if the canary is yellow; but this union is not so easy as that with the green canary, which appears to bear a nearer relation to the siskin.

Diseases.—To the other maladies common to the birds of this family we must add epilepsy, of which these birds often die †. They may, however, be kept from eight to twelve years.

Mode of Taking.—With good traps and nets made for this purpose, several dozen of these birds may be taken at once in the winter. They also collect in numbers, in the spring, on the decoy bush, and they are so fearless, that in the villages a person, who has his house situated near a stream bordered with alders, need only place a siskin in the window, near a stick covered with bird-lime, and he may catch as many as he wishes. I have

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* It only comes to England during winter.—Translator.

† It is not so often of epilepsy, and fat, that male birds die, as for the want of pairing. Perhaps this may be increased, thoughtlessly, by too heating and too succulent food. However this may be, if a male that has died thus in spring be dissected, its reproductive organs will be found exceedingly swelled. It can only be preserved by giving at the time refreshing and moderate food. Boiled bread and milk is very useful.—Translator.

caught some at my window in a cage strewed with hemp and poppy-seed, by letting the door fall by means of a string, when the birds had entered, one of the decoy birds in my room serving to attract them. When the place where they drink at noon is discovered amongst the alders, numbers may be caught by merely laying across the stream some branches covered with bird-lime.

Attractive Qualities.—Their plumage and song are both attractive, though with the latter several tones are mingled, that somewhat resemble the noise made by a stocking-loom. This makes them great favourites with stocking-weavers. They imitate tolerably the song of other birds, such as that of the tit, the chaffinch, and the lark; but they cannot give a musical air. Their carolling is only interrupted during moulting, and very much tends to excite their companions to warble in their turn. The loss of their liberty affects them so little, that they will eat as soon as let out of the hand, after being caught, and on the second day will allow any one to approach their cage without alarm. They are soon taught to draw up little buckets, and many other little manœuvres that they execute gaily; there is no difficulty in accustoming them to go and return if the winter is chosen; the cage should be kept open at the window, and hemp and poppy-seed scattered at the entrance; they will return there in general, and bring several companions with them. This plan will not succeed so well in March, September, and October, the time when these birds roam through the country in search of food, though I have seen some tamed in this manner return after a long absence.

THE RING SPARROW.

Fringilla petronia, Linnæus; La Soulci, Buffon; Der Graufink, Bechstein.

Independently of the beak, this bird may be taken for a female yellowhammer, as it resembles it so much in its shape and plumage. Its length is five inches three-quarters, of which the tail measures two. The beak, five lines long, is thick at the base, grey brown above, and white below. The feet, ten lines high, are grey brown; the whole head is of a reddish ash-colour, but a dirty white ring surrounds it from one eye to the other.

The female is greyer on the upper part of the body, and the front of the neck is only pale yellow.

Observations.—Ring sparrows are found in most European forests, or woods; they are common enough in several parts of Germany *, those that inhabit the northern parts removing in winter; but the others are stationary.

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* They are not natives of Britain.—Translator.

They live on seeds and insects like the house sparrow, and make their nests in hollows of trees. In the house they are fed on rape and poppy-seeds; they also readily eat the first universal paste. They are less prized for their warbling, which is insignificant, than for their beauty or rarity.

THE SERIN FINCH.

Fringilla serinus, LINNÆUS; Le Serin vert, ou le Cini, BUFFON; Der Girlitz, BECHSTEIN.

THIS bird is smaller than the siskin, its length not exceeding four inches and a quarter, of which the tail measures one inch and a third. The beak is short and thick, brown above and white below; the iris is dark chestnut. The shanks are six lines high, and are of a flesh colour. The plumage of the male very much resembles that of the grey canary; the front of the head, the circle round the eyes, a kind of collar, the breast and belly, are pale jonquil-coloured, mixed with a little green; the nape of the neck, the cheeks, the temples, and lesser wing-coverts, are of a canary green, mingled with rust colour and black.

The spots scattered over the plumage are not isolated, but united to each other by an undulating line; they are so small on the head, that it is only speckled.

It is necessary to examine the female very closely to distinguish it from the siskin, for, with the exception of a reddish grey tint, the colours are the same; but its beak is shorter, its tail longer, and its shape freer.

From my latest observations this bird appears to be the same as the citril finch; comparing them together in cabinets has confirmed my opinion; but that which has decided me is the testimony of my friend, Dr. Meyer, of Offenbach, who has often seen and even fed in his house several of these birds. From him I derive the rest of this article.

HABITATION.—It is not more than ten years since the serin was observed between Frankfort and Offenbach. They arrive every year in large flights, during March, and depart in October; but there are always some that remain all the winter. Several were taken in January, 1800, when the thermometer was at twenty-one degrees Réaumur, and I myself have seen some near Offenbach at the end of February. They appear to prefer fruit trees, yet in woods they also appear attached to beech and oak trees; but I have never met with them by the sides of rivers or streams planted with willows.

Food.—They feed on all the small seeds found in fields and orchards, particularly groundsel, plantain, garden pimpernel, and others of the same kind.

In the house, rape, mixed with a little poppy seed, agrees very well with them; a few grains of hemp seed and husked oats may be added from time to time.

Breeding.—Their nest is generally placed on the lower branches of apple and pear trees, sometimes on beeches and oaks, but never on willows by the water-side. It is constructed of fine and divided roots, mosses, lichens, principally of those which are farinaceous, the whole being entwined with great nicety, and lined with a thick bed of feathers, horse-hair, and pigs' bristles. They lay three or four, rarely five, eggs of the form of, but rather smaller than, those of the canary; white, but having at the large end a circle of spots and dots of a bright reddish brown. The hen sits on the eggs thirteen or fourteen days, during which time the male feeds her. He also helps to feed the young ones, which is done by disgorging the food; the young perfectly resemble the grey linnet; they may be reared easily on soaked rape seed; but it is best to take the parent birds, and place them in the cage with their little ones, which they will continue to feed. The young birds remain grey till after moulting, they then attain their full plumage, as described before, but are never so beautiful in the house as in their wild state. After being kept a few years in a cage, the yellow in those taken full grown becomes pale, and fades at length to nearly white. This bird will pair with the canary, siskin, linnet, or goldfinch.

Mode of Taking.—These birds are easily taken in the area, or barn-floor trap, on a decoy bush, and with lime twigs placed near the stalks of plantain.

Diseases.—With the exception of consumption, of which one I had died, I know of no disease they are subject to.

Observations.—Of all house birds, these are the most sprightly and indefatigable songsters. Their voice is not strong, but it is very melodious. The song, with the exception of a few passages, is like the lark's, and might be mistaken for the canary's. In their wild state they sing incessantly, either perched on the outer branches of a tree, or whilst rising in the air, and gently sinking again to their former situation, or whilst flying from tree to tree. Their call resembles that of the canary, and their habits are also similar to that species.

They are of a very affectionate character; when allowed to range the room with siskins, linnets, and similar birds, they will caress all with the beak, but seem to prefer the company of the goldfinch, whose tones they will imitate, and improve their warbling by it. They are indeed very attractive birds

THE CITRIL FINCH.

Fringilla citrinella, Linnæus; Le Venturon, Buffon; Der Citronenfink, Bechstein.

This bird very nearly resembles the canary in its colour, shape, song, and habits; but it is smaller and its notes weaker. Its resemblance, however, is so marked, that I should be inclined to suppose it the primitive wild stock, if the canary had not its representative in those islands from which it takes its name. The length of the citril finch is five inches, of which the tail measures two. The beak is short, the feet flesh-coloured, the plumage on the upper part of the body yellowish green, streaked with brown; the under part of the rump greenish yellow; the principal tint on the breast yellow.

The female is less spotted, and the general shade of colour is lighter.

Observations.—This species, inhabiting the south of Europe, occasionally strays into the southern parts of Germany*, and the sweetness of their song makes them much sought after. They should be treated in the same manner as canaries.

THE LAPLAND FINCH.

Fringilla Laponica, Linnæus; Le Grand Montain, Buffon; Der Lerchenfink, Bechstein.

This would be mistaken for a lark at first sight, as much from its plumage as from the length of its spur. We should also see them much oftener in Germany if the bird-catchers, who catch them in their lark's nests, did not take or kill them both indifferently. Their decoys are the same as the buntings (*Emberizæ*, Linn.), for though we cannot observe them much whilst alive, we cannot be deceived as to their pairing with finches (*Fringillæ*, Linn.) buntings and larks. They are about the size of the yellowhammer, six inches and a half in length, of which the tail measures two. The beak is yellow, with a black tip; the feet dark brown; the head blackish, spotted with reddish white, sometimes quite black; a white line passes from the base of the bill above the eyes, down each side of the neck, curving towards the breast; the upper par of the body is red, with brown spots; the throat and breast are pale red; some males are black in the middle of the lower part.

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* They are not natives of Britain.—Translator.

The female is paler in its colours; its breast is spotted with grey and black; in fact its plumage resembles the field lark's.

Observations.—This bird is always found in the north, both in the old and new world, and goes towards the south in winter. It is met with by us on its arrival with the larks, and on its return with the snow bunting, but it is oftenest taken with larks. Its call is a kind of shrill whistle, and its song is very similar to the linnet's; the female also warbles, but only in the bullfinch's style. It ranges the room like the lark, and if in a cage hops about its perches like the chaffinch. It is fed on rape, hemp, and poppy seed, which appear to agree with it very well. It may be fed at less expense on the first universal paste, as it also likes meal worms. I think that in its wild state it lives, like the chaffinch, on seeds and insects.

THE SNOW FINCH.

Fringilla nivalis, Linnæus; Le Niverole, ou Pinson de neige, Buffon; Der Schneefin, Bechstein.

The name has been given it as much from its being found on high mountains and the colour of its plumage, as for its resemblance to the snow bunting. Its total length is seven inches and a quarter, of which the tail measures two and a half; the beak six lines long, very pointed, but thick at the base, and of a glossy black; the feet ten lines high, dark chestnut colour: its plumage is pretty; the top of the head, cheeks, temples, nape, back, and sides of the neck are dark ash-coloured.

The female only differs from the male in the grey of the head having a reddish tint, and the whole of the under part of the body, being white; the breast has also a dirtier shade, and the sides are spotted with black.

Observations.—The snow finch inhabits the southern Alps, but is found as far north as the middle of Germany. I have even seen them in Thuringia, in company with the mountain finch; it is a sprightly bird, and very fearless in a cage. It may be fed on rape, millet, and hemp seed; but it appears to prefer the seed of the fir and nettle hemp (*Galeopsis cannabina*): one would think that in its wild state it also fed on insects, as it readily takes meal worms when offered them. Its call is "*kipp, kipp.*" It sings a great deal, but its song is not more agreeable than the mountain finch's, to which it appears allied, and like that is only kept in the house for its beauty and rarity

THE CANARY.

Fringilla canaria, **Linnæus**; Le Serin de Canarie, **Buffon**; Der Canarienvogel. **Bechstein.**

This pleasing bird had its origin in the pleasant climate and delightful valleys of the Canary Islands, and is now spread throughout Europe, part of Asia, and as far as Siberia. The beauty of its form, its plumage, and its song, united with its great docility, soon gained it admittance into the most magnificent abodes, where every one delights in rearing and preserving it, whilst the fairest hands are often eager to present it with the most delicate food. It was brought into our climate as early as the beginning of the sixteenth century. The arrival of the canary in Europe, is thus described:—A vessel, which besides its merchandise was bringing a number of these birds to Leghorn, was shipwrecked on the coast of Italy, opposite the island of Elba, where these little birds, having been set at liberty, took refuge. The climate being favourable, they increased, and would certainly have become naturalised, had not the wish to possess them occasioned their being caught in such numbers, that at last they were extirpated from their new country. From this cause Italy was the first European country where the canary was reared. At first their education was difficult, as the proper manner of treating them was unknown; and what tended to render them scarce was, that only the male birds were brought over, no females.

The grey of its primitive colour, darker on the back and greener on the belly, has undergone so many changes from its being domesticated, from the climate, and from the union with birds analogous to it (in Italy with the citril finch, the serin; in our country with the linnet, the green finch, the siskin, and the goldfinch), that now we have canaries of all colours. If we had not sufficient proof that canaries came originally from the Fortunate Islands, we should think the citril finch, the serin, and the siskin, were the wild stock of this domesticated race. I have seen a bird, whose parent birds were a siskin and serin, which perfectly resembled a variety of the canary which is called the green. I have also seen mules from a female grey canary, in which was no trace of their true parentage. The grey, the yellow, the white, the blackish, and the chestnut, are the principal varieties, and it is from their combination, and from their tints, that we derive the numerous varieties that we now possess.

Those canaries, that have the upper part of the body of a dusky grey or linnet brown, and the under part the yellowish green of the green-bird, with dark brown eyes, are the strongest, and most nearly resemble the primitive race *. The yellow and white often have red eyes, and are the most tender. The chestnut are the most uncommon, and hold a middle rank for strength and length of life between the two extremes. But as the plumage of the intermediate ones is a mixture of these principal colours, their value depends on the pretty and regular manner in which they are marked. The canary that is most admired amongst us now, is one with the body white or yellow, the head, particularly if crested, wings and tail, yellowish dun; the second in degree is of a golden yellow, with the head, wings and tail black, or at least dusky grey. Next follow the grey or blackish, with a yellow head and collar; the yellow, with a blackish or green tuft, which are very much valued. As for those that are irregularly spotted, speckled, or variegated, they are much less sought after, and are used to pair with those of one colour, white, yellow, grey, brown-grey †, and the like.

The female can scarcely be distinguished from the male, but the male has generally deeper and brighter colours, a head rather larger and longish, a longer body, a more elegant form, neck not quite so short, and higher shanks. There is a feather under the beak, of the shape of a bean, placed lower than the rest, and the temples and circle round the eyes are of a deeper yellow than the other parts of the body.

The length of the canary is five inches, of which the tail measures two and a quarter: the beak, five lines long, is strong, very pointed, and whitish; the shanks, eight lines in height, are of a flesh-colour.

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* I have observed, says Adanson, that the canary which becomes white in France is, at Teneriffe, of a grey, almost as dark as that of the linnet.—AUTHOR.

† It is a mistaken idea that the difference of colour in canaries depends on the difference of food. The wild birds vary much more than the domestic, yet their food is more uniform. The being domesticated, the want of exercise and natural food united, may occasion an alteration in the colours of the plumage. My birds have only very simple food, and yet they are not the less of various colours.—AUTHOR

I shall end this description with an account of the different mule birds obtained from the canaries.

Mule Canaries.—1. *Mules between a Canary and a Goldfinch*, present in their plumage an agreeable mixture of the colours of their parents. The most beautiful which I have seen was greyish ash-colour in the middle of its crest, and silvery white on the rest of its head and nape; a broad orange border surrounded the beak, and the neck was adorned with a white collar; the back was a dusky grey, with black streaks; the rump white, the under part of the body of a snowy whiteness; the under tail-coverts, the wings and first quill-feathers white, but the others, as well as the coverts, black, edged with yellow; the middle of the wing was also adorned with a beautiful golden yellow spot; the white tail had a black spot on the sides, the white beak was tipped with black, the feet were white. The mother of this beautiful bird was white, with a greenish grey crest. In general, one may be sure of fine birds when yellow or white females are paired with goldfinches.

2. *Mules between the Canary and the Siskin.*—If the mother be a green canary, the mules will resemble a female siskin; but, if she is white or yellow, their colours are lighter, yet without differing greatly from those of the siskin, which they always resemble in shape.

3. *Mules between a Canary and a Green-bird, or a Citril Finch.*—If the hen canary is neither white nor yellow, the mules differ little from the common grey or green canary, except in being more slender, and having the beak shorter and thicker.

4. *Mules between a Canary and a Linnet* will be speckled if the mother is white or yellow, but if she is grey they will be like her, except that the tail will be longer.

The other mules are rarer, because more difficult to obtain, as we shall see elsewhere.

Habitation.—Except in the breeding season the male canaries are kept alone in separate cages, which, whatever the shape, ought not to be less than eight inches in diameter and a foot in height, with two sticks placed across for the bird to perch on. The females may be allowed to range the room with one wing clipped, or, what is better, kept in large cages, where, from having plenty of exercise, their health and strength are better preserved. In the small cages, glass vases should be placed on the outside, at the extremities of the lower stick, to hold the food and water. These may be surmounted with a cap of tin, or something of the kind, to prevent the seed from being so easily scattered. It is for this reason that the large seed drawers in an aviary are covered with iron wire-work, leaving only sufficient spaces for the heads of the birds to pass through. Cleanliness being a great preservative against most of their disorders, the bottom of the cage should be made to draw out, that it may the easier be cleaned and covered with sand. This should be done every day, or at least several times a week. These tender birds, being natives of a warm climate, and becoming more delicate instead of hardier from being kept in the house, require a temperature analogous to that of their native climate. They must be protected from the cold, and never allowed to remain in winter in a cold room, which would occasion many diseases, or even death. But, in summer, it is proper to place them in the open air, and they enjoy it very much. Never do they sing so gaily as on fine days, and their cages should therefore be placed at the open window, that they may have the advantage of the light and heat of the sun, which is particularly serviceable to them whilst bathing.

Food.—This is an important point, for, in proportion as it is simple and natural, it will be wholesome; and, on the contrary, the more it is mixed and rare, the more injurious and productive of disease will it be. What I have found the best is summer rape-seed; I mean that which is sown at the end of spring, which is small and brown, in distinction from the winter rape-seed, which is sown in the autumn, and which is large and black. This seed alone agrees with canaries as well as with linnets: but to give them the pleasure of variety, a little bruised hemp or canary, or poppy-seed, is added to it, especially in the spring, when they are intended to breed. Indeed a mixture of summer rape-seed, oatmeal and millet, or canary-seed, may be given them as a great treat. But whatever seeds they may have, they equally require green food, as chickweed in spring, lettuce and radish leaves in summer, endive, water-cress, and slices of sweet apple, in winter. As to that whimsical and complicated mixture, prescribed and used by many people, of rape, millet, hemp, canary seed, whole oats and oatmeal, poppy, lettuce, plantain, potentilla, and pink seeds, maize, sugar, cake, hard biscuit, cracknels, buns, and the like, so far from being wholesome, it injures the birds in every respect. It spoils their taste, weakens their stomachs, renders them feeble, sickly, and incapable of bearing moulting, under which they most frequently die. It is true, they may be accustomed to eat of everything which comes to table, but to teach this habit is also to prepare a poison for them, which though slow is not the less sure, and brings them to a premature death; whilst every day we see bird-fanciers who are poor, who hardly know the names of these delicacies, rear, on the simplest food, a considerable number of the healthiest, cleverest, and strongest canaries. We must, however, be guided in a great measure by the constitutions of the birds. They should be daily supplied with fresh water, as well for drinking as bathing, in which they delight. In the moulting season, a nail or bit of iron should be put into the water, in order to strengthen the stomach. Saffron and liquorice are in this case more hurtful than useful. Grains of the sand, with which the bottom of the cage is strewed, afford the birds a help to digestion. What has been said above. refers solely to the food of full-grown canaries; the young, which cannot feed themselves, require a different diet.

Breeding.—A very important branch in the history of the canary is its education, which is not without difficulties, but these are augmented by all the refinements and artificial plans which some persons follow with so much parade. A male of from two to five years of age should be chosen for pairing; for experience has taught, that if a young male is placed among older females, they will produce more males than females. A bird is known to be old by the blackish and rough scales of his feet, and by his long and strong claws.

Good males are valuable and scarce. Some are dull and melancholy, always sad, and seldom singing; indifferent to their mates, which are equally so to them; others are so passionate, that they beat or even kill their mates and their young; others are too ardent, and pursue their mates while they are sitting, tear the nest, destroy the eggs, or excite the females so much that they voluntarily abandon them.

The females have also their defects. Some, too ardent, only lay without sitting; others neglect to feed their young, beat them, and pick out their feathers, so that the wretched little creatures die miserably; to others, laying is so painful that they are too much fatigued to sit, or they lay each egg only after a long interval. Quacks (for we find them on this subject as on others) pretend to have specifics for the cure of these defects; but their pretended remedies are mere deceptions, and the use of them causes much trouble. The best plan is to remove the vicious birds, and to retain only those which have none of the above-named bad qualities.

To obtain the most brilliant colours, those birds which have them clear, and whose spots are distinct and regular, are paired together. This, of course, can only be done in separate cages. In aviaries, where the birds pair by choice, the offspring are generally mixed and blotted. A greenish or brownish bird, placed with a bright yellow one, often produces dim white, or other admired colours. It is better never to place together two crested birds, because the offspring is apt to have a part of the head bald or otherwise disfigured.

The best time for pairing canaries is the middle of April. Either one male, and one or two females, are placed in a large cage, or many of both sexes are united in a room or aviary, having the advantage of a south aspect. Nests made of turned wood, or osiers, are given them, as straw ones are too easily torn. It is a good plan to place in the room or aviary slips of pine, which being cut in February do not lose their leaves. If a little enclosure of wire-gauze can be fixed over the window, where the birds can enjoy the fresh air, nothing will more effectually contribute to render the young healthy and robust.

Birds, which are to be paired for the first time, should be previously placed in the same cage for seven or eight days, in order to become acquainted and accustomed to live together. If two females are to be caged with one male, it is especially necessary that they should be together long enough to leave off quarrelling, and the pairing cage should be divided into two equal parts, communicating by a sliding door. This being done, a lively male and one of the females should be placed in the first division;

as soon as she has laid, the male should be moved into the other division, the door of separation being shut; but as soon as the other has also laid, the door may be left open: the male will then visit the females alternately, and they will not trouble themselves about each other; but without these precautions jealousy would incline them to fight, and destroy each other's eggs. When it is intended to place a great many females, double or treble the number of males, in a room or aviary, the latter should always be first paired with a single female, which will ever after remain the favourite; and it will only be when she is about to sit that he will pair with the others, and this is all the notice he will take of them, for afterwards he will only notice their young. It is from these mothers, however, that the most and the best birds are generally procured.

If the floor of the room or aviary is well covered with moss, little else need be added for making the nests, otherwise they should be supplied with the hair of cows and deer, hogs' bristles, fine hay, lint, wool cut two or three inches long, paper shavings, and the like. That which is coarsest serves for the outside, and the softest and finest for the inside. If they have shrubs, traces of the natural instinct of the canary are soon observed in the nests which they construct without the help of the turner or basket weaver; but they are of an inelegant form, and the outside is not very carefully finished. The females alone, as is usual among birds, are the builders, the males only choosing the situation and bringing the materials. It is in the nest, where the female is in continual motion, that the pairing takes place; she invites the male by constant little chirpings, repeated more quickly the nearer she is to laying. Seven or eight days are generally reckoned from the first pairing to the laying of the first egg; the other eggs, whose number varies, without exceeding six, are laid successively every following day, and often at the same hour. The laying ended, pairing continues during the first days of incubation.

If the pairs agree, they must be left entirely to themselves, without endeavouring to use art to help nature, as many do. It is usual to take away the first egg and substitute an ivory one, which is repeated with the others to the last, preserving them in the mean time in a box filled with fine dry sand; they are afterwards restored all together to the nest to be hatched *.

The females lay three or four times a year, from April till September: there are some even so prolific that moulting does not stop them. The eggs, of a sea-green colour, are at one end more or less spotted or marked with maroon or violet. The period of incubation is thirteen days.

If, owing to the weakness of the male or female, it is suspected that some of the eggs are barren, they should on the eighth day be examined by holding them lightly between the fingers in the sunshine or before a candle;

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* This practice is not according to nature, which we can rarely oppose without inconvenience. " This plan causes the mother a greater loss of heat, and burdens her at once with five or six little ones, which coming together, disturb rather than please her; whilst in seeing them hatched successively one after the other, her pleasure is increased and supports her strength and courage. Very intelligent bird-fanciers assure us, that by not removing the eggs from the female, and leaving them to be hatched in succession, they have always succeeded better than when substituting ivory eggs." *Buffon.*—TRANSLATOR.

the good ones will be already filled with blood-vessels, while the bad will continue clear, or even be already addled: these must be thrown away. It is rare for the male to sit in his turn during some hours of the day, the female seldom allowing it, for as soon as she has eaten she flies back to the nest. If the male gives up his place readily, so much the better; if not, she drives him away by force and by pecking him. She appears to know his want of skill in this employment.

The near discharge of a gun, a door slammed with violence, and other similar noises, will often kill the young in the shell; but their death happens generally through the fault of a bad sitter.

As soon as the young are hatched, a small jar is placed beside the usual feeding trough, which contains a quarter of a hard egg minced very fine, white and yellow together, with a bit of white bread steeped in water, and afterwards well pressed; another jar should contain rape seed which has been boiled, and then washed in fresh water, to remove all its acrimony. Some persons, instead of white bread, use biscuit, but this is unnecessary; what, on the contrary, is very essential, is to take care that this food does not turn sour, for it would then infallibly destroy the young nurslings. This food I find by experience to be the best.

Now is the time when the male assumes his important duties of nursing-father. These he fulfils indeed almost alone, in order to give his mate time to rest before a new sitting. When it is necessary to bring up the young by hand, a bit of white bread, or some biscuit, should be pounded very fine, and this powder should be mixed with well-bruised rape-seed. This composition serves, with a little yolk of egg and water, to make a paste, which is given to the young birds on a quill cut like a spoon; each nursling requires for a meal four beakfuls, well piled upon the quill, and these meals must not be fewer than ten or twelve a day.

The young should remain warmly covered by the mother as long as they continue unfledged *; that is to say, generally for twelve days: on the thirteenth day they begin to eat alone. In four weeks they may be placed in other cages of a sufficient size; but they must still for some weeks be fed with the above-mentioned paste, conjointly with the food of full-grown birds; for the sudden privation of this nourishment often occasions death, especially when moulting.

Experience proves that generally those canaries which are hatched in a large garden aviary, where they enjoy fresh air, and considerable space for the exercise of their wings, are more vigorous, more healthy, and more robust than those which are bred in rooms, and it is easy to understand the reason.

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* It sometimes happens in very dry seasons that the feathers of the young birds cannot develop naturally; a bath of tepid water employed on such an occasion by Madame * * * was so successful that I cannot do better than recommend it. The same lady succeeded equally well in similar circumstances in hatching late eggs; she plunged them for some minutes in water heated to the degree of incubation, and immediately replaced them under the mother; in a short time she enjoyed the pleasure of seeing the little ones make their appearance. This interesting experiment may be applied to all sorts of birds, and may be particularly useful in regard to those of the poultry yard.—TRANSLATOR.

I must not omit to mention here an important observation, which has been often made, that if two females are given to one male, and one of them happens to die, the other immediately takes charge of the abandoned eggs, and assumes so completely the duties of foster-mother, that in order rigorously to fulfil them she avoids and even repulses the caresses of her mate.

Canaries pair not only among themselves in our aviaries and cages, they also form connexions foreign to their species, and, provided the analogy is not too remote, produce fruitful mules. Serins, citral finches, siskins, goldfinches, or linnets, are the species which succeed best*. To succeed, however, it is necessary that the birds should have been brought up from the nest. The custom is to give an old male of one of the above-named species to a female canary, the principal reason being that an old female of one of those species, though she would not object to the union, could never be induced to lay in an artificial nest, like a female canary. The offspring of these mixtures combine the colours of the father and mother, learn well enough if they descend from a linnet or goldfinch, but sing badly if they come from a siskin or lesser redpole.

They are easily brought up with the paste mentioned above for canaries. It is asserted that the mules of serins, citral finches, and goldfinches, are fruitful. It is remarked, however, that their first eggs are very small, and the young hatched from them very weak; but the next year the eggs become larger, and the young stronger and more robust.

No sooner can the young canaries eat alone, which happens on the thirteenth or fourteenth day, and sometimes even before they leave the nest, than the males begin to warble, and some females also, but in a less connected manner, which serves to point them out. As these pretty birds are so docile as to neglect entirely their natural song and imitate the harmony of our instruments, it is necessary immediately to separate from his companions and from every other bird the young one which is to be instructed, by putting him aside in a cage which is at first to be covered with a piece of linen, and afterwards with a darker cover. The air which is to be taught should be performed five or six times a day, especially in the evening and morning, either by whistling, or on a flageolet, or bird-organ; he will acquire it more or less readily, in from two to six months, according to his abilities and memory; if his separation from the other birds is delayed beyond the fourteenth day, he will retain some part of his father's song, which he will always intermingle with his acquired air, and consequently never perform it perfectly. The opinion of some, that the grayish canaries have more facility in learning than the yellow or the white, is unfounded, their only advantage over those of a different hue being that they are generally more robust and vigorous. I have not either found that the true No. 3 suits them better than No. 1 or No. 2; these latter, on the contrary, have appeared to me to please them best.

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* Green birds, bullfinches, and even chaffinches, yellowhammers, and the like, have been tried; but the difficulty augments with the difference of species and food: for example, I have never seen a male canary very fond of a female yellowhammer, nor a male of the latter kind of a female canary, though the plumage may be selected so as to offer a striking resemblance. An ardent bullfinch will sometimes yield to the allurements of a very ardent hen canary. I have myself witnessed it; but with every care, it is seldom that the eggs prove fruitful, and produce young. Dr. Jassy, however, writes me from Frankfort, that he has obtained mules of a bullfinch and canary, by making other canaries sit on the eggs and bring up the young; and that this plan is pursued in Bohemia. A tufted or crested female should never be chosen, because this ornament is very unbecoming to the large head of a mule. "My bullfinch," he adds, "is so attached to the female canary that he mourns all the time they are separated, and cannot bear any other bird."

I possess a nightingale which, having been for a long time shut up with a female canary, lives very sociably with her, and sings as usual; indeed, he was so ardent in the spring, that he paired with her in my presence, but the eggs were unproductive. I shall try next spring, if the same thing happens, to give the eggs to another sitter.—AUTHOR.

There is too much trouble and risk in allowing canaries to go in and out of their cages for it to be worth the trouble of teaching them this. Notwithstanding all my attention, and the care which I have taken to follow exactly the prescribed rules, I have never succeeded; and the cleverest bird-fanciers have assured me that it should never be attempted but when they have young ones, and above all, there must be no canaries in the neighbouring houses, which might entice them away. Indeed it is no easy matter to accustom a bird to go and come. There, as in many other cases, conclusions in regard to the species have been drawn from individuals. It is certain that very few tame birds easily acquire this trick, and as I show in their histories, with respect to others, probabilities are too often stated as truths.

Diseases.—Birds which seldom enjoy the benefit of fresh and pure air, prisoners destitute in their confinement of the means of exercise, must be particularly subject to the common diseases which have been named, and also to many other peculiar ones. The following are some of the disorders incident to canaries.

1. ***Rupture***, or ***Hernia*:** this is very common among young birds, and is a kind of plethora, which produces inflammation in the bowels. The symptoms of this disease are, thinness, the skin of the belly transparent and distended, covered with little red veins surcharged with blood, the bowels are black and knotted, and descend to the extremity of the body; there are no feathers on the diseased part; the invalid does not eat, and dies in a few days. Too nutritious, or too much food, being the cause of the disease, the only remedy is a very severe regimen, and even then it can be cured only in its first stages. The diseased birds must be immediately removed, and fed with nothing but lettuce or rape-seed, in very small quantities. A bit of iron should also be put in the water, and everything be done to invigorate and purify them. It is very rare for young birds which are brought up by their parents to suffer from this disease, as they never over-feed them. In bringing up by hand this moderation should be imitated, and they should neither be over-fed nor pampered.

2. *The yellow gall in the head and eyes*, arises from over heat; a cooling diet is therefore the only remedy. If the tumour has grown to the size of a grain of hemp-seed, it must be cut off, and the wound be anointed with a little fresh butter, or bathed with urine.

3. *Sweating.*—There are some females which, during the time of incubation, or while they are on their young, are subject to profuse perspiration; the feathers of the belly are in consequence so wet as to destroy the brood: as soon as this indisposition is perceived the invalid must be washed with salt water, and after a few minutes be plunged into pure water, to wash off the salt, and be dried in the sun as quickly as possible. This operation is to be repeated once or twice a day till recovery; but as relapses are frequent, it is better to separate the female, and not allow her to sit.

4. *Asthma*, or *hard breathing*, which arises from an oppressed stomach, generally yields to plantain and rape seeds moistened with water as the sole food.

5. *Sneezing*, produced by an obstruction in the nostrils, is removed by passing a very small quill up them to clear them.

6. *Loss of voice.*—It sometimes happens that after moulting a male suffers the loss of its voice; it must then be fed with the same paste as is prepared for young birds, adding some lettuce-seed, and, according to some bird-fanciers, a bit of bacon should be hung to the cage, for it to peck.

7. *Constipation.*—The remedy for this is plenty of green food, as lettuce leaves, watercress, &c., not forgetting bread and milk.

8. *Epilepsy*, which is common among many kinds of birds, may be produced in canaries by particular causes, as great delicacy and timidity. We should therefore avoid alarming them, either by catching them too suddenly or violently, or by tormenting them in any way. They are to be cured as has been already directed in the Introduction.

9. *Overgrown claws and beak.*—When the claws or beak want paring, sharp scissors must be used, and care taken to avoid drawing blood, lest the bird should be maimed. They often injure themselves when their claws are too long, and get hooked in the wires of the cage, and continue thus hanging. The females, in the same way, get entangled in their nests.

10. *Lice.*—The parasite insects by which these little prisoners are often tormented, are generally produced by slovenliness. Besides frequent bathing, the cages must be cleaned with much care and vigilance, and have plenty of very dry sand strewed over the bottom. These lice, like bugs, retire during the day to cracks and crevices, which accounts for old wooden cages being often infested. To get rid of them, hollow sticks or stalks of rushes are used, which must be examined and changed every day. The plan is good, but by using only tin cages, which may, more easily than any others, be passed through boiling water, the object is more certainly attained.

It is rare for canaries which are kept for breeding to live longer than from seven to ten years; while others, if well used, may be preserved for eighteen or twenty years.

ATTRACTIVE QUALITIES.—The plumage, pretty form, and docility, the charming familiarity which disposes it to nestle without fear or reserve beside us, as well as its melodious song, have long introduced the canary to all classes of society. Always before our eyes, the object of the most assiduous care, and constant attention, it has afforded a thousand occasions for studying its character, or rather the character and dispositions of the different individuals of its species. It has been discovered that among them, as among quadrupeds, and even man, some individuals are gay and others melancholy; some quarrelsome, others mild; some intelligent, others stupid; some with quick memories, others lazy; some greedy, others frugal; some petulant, others gentle; some ardent, others cold.

Its singing, as strong as varied, continues uninterrupted during the year, excepting at the time of moulting, and even this exception is not general. There are some individuals which sing also during the night*.

Those which introduce into their melody some passages of the nightingale's song are the most esteemed of all canaries; they are called Tyrolean canaries, because they are considered natives of the Tyrol, where they breed many of these birds. The second are the English canaries, which imitate the song of the woodlark. But in Thuringia the preference is generally given to those which, instead of a succession of noisy bursts, know how, with a silvery sonorous voice, to descend regularly through all the tones of the octave, introducing from time to time the sound of a trumpet. There are some males which, especially in the pairing season, sing with so much strength and ardour that they burst the delicate vessels of the lungs, and die suddenly.

The female, particularly in the spring, sings also, but only a few unconnected and unmusical sounds. Old ones which have done breeding often sing in this way at all seasons.

Canaries are particularly remarkable for quickness and correctness of ear, for the great ease with which they exactly repeat musical sounds, and for their excellent memory. Not only do they imitate all the birds in whose neighbourhood they have been placed when young †, mixing agreeably these songs with their own, whence have arisen those beautiful varieties which each family transmits to its descendants; but they also learn to repeat correctly two or three airs of a flute or bird-organ, and even to pronounce distinctly some short words. Females also have been known to perform airs which they had been taught.

I shall conclude this article on canaries by pointing out the best rules for obtaining and preserving good singers. The most essential is to choose from among the young that which promises a fine tone, and to seclude it from all other birds, that it may learn and remember nothing bad. The same precaution is necessary during the first and second moulting; for being likely to re-learn (if I may say so) its song, it would introduce into it with equal ease foreign parts. It must be observed whether the bird likes to sing alone, or in company with others, for there are some which appear to have such whims, liking to hear only themselves, and which pout for whole years if they are not humoured on this point. Others sing faintly, and display their powers only when they can try their strength against a rival. It is very important to distribute regularly to singing birds the simple allowance of fresh food which is intended for the day. By this means they will sing every day equally, because they will eat uniformly, and not pick the best one day and be obliged to put up with the refuse the next.

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* Some do this naturally, others are taught it in their youth, by covering the cage and keeping them in the dark during the day, long enough for them to be hungry; they are thus forced to eat by candle-light. Gradually they become accustomed to this, and at last sing.—AUTHOR.

† Nothing is more delightful than to hear them imitate the song of the nightingale; I prefer those which have this talent, and I never fail to possess one.—AUTHOR.

About two spoonfuls of the dry food mentioned above, is sufficient for the daily nourishment of a canary; what he leaves may be thrown to the birds which are free in the room, and will serve as a variety to those which have only the universal paste to satisfy their appetite.

THE GLOSSY FINCH.

Fringilla nitens, LINNÆUS; Le Moineau du Brésil, BUFFON; Der glänzende Fink, BECHSTEIN.

THIS bird is smaller than the house sparrow, being only four inches and a half long. The beak and feet are flesh-coloured; the iris is white. All the plumage is of a bluish black, or black with a hue of burnished steel; the female has the upper part of the body covered with blackish feathers, bordered with a yellowish brown; the rump gray, the under part of the body dark yellowish brown; the tail-feathers black with gray edges; the feet reddish; in some males the beak and feet are black.

OBSERVATIONS.—This bird is found in the woods of Cayenne, and the neighbourhood of Carthagena in America. Its clear note is very agreeable. It appears to sing with so much energy as to ruffle the feathers of the head and neck. Its food consists of all kinds of seeds and fruits. Though bread appears to be sufficient when caged, it is better to add rape, millet, and poppy seed. It is easily tamed.

THE PURPLE FINCH.

Fringilla purpurea, LINNÆUS; Bouvreuil violet de la Caroline, BUFFON; Der Purpurfink, BECHSTEIN,

THE size of this bird is that of the common chaffinch, the length being five inches and a half; the plumage is of a deep violet, or reddish purple, mixed with a little dark brown; the quill-feathers are brown on the inside; the belly is white: the tail is rather forked.

The female is all over of a deep blue, except the breast, which is speckled.

Observations.—These birds are very numerous during the summer in Carolina, which they quit in the winter in small flights. Juniper berries are their principal food; and they eat them with pleasure when caged. They are generally fed with rape and canary seed; but are soon accustomed to all the food of the aviary. They are more admired for their plumage than their song.

THE AMERICAN GOLDFINCH.

Fringilla tristis, LINNÆUS; Le Chardonneret jaune, BUFFON; Der Gelbe Stieglitz, BECHSTEIN.

THIS bird is as large as a linnet, its length being about four inches and a third. The beak and feet are whitish; the iris is nut-brown; the forehead is black, and the rest of the body yellow.

The female has no black on the forehead; the upper part of her body is of an olive green; the throat, breast and rump of a bright yellow; the belly and vent white; the wings and tail blackish.

The young males at first exactly resemble the females, the only difference being the black forehead.

These birds build twice a year, in spring and autumn. Edwards says that they also moult twice, so that it is only during the summer that they are of the colours described above. In the winter the top of the male's head is black; the throat, neck, and breast, yellow; the rump also yellow, but of a whitish hue; the feathers of the back olive brown, lighter at the edges; the wings and the tail black, with white edges to almost all the feathers.

The female is generally of a lighter colour, and the top of the head is not black: thus we perceive that in winter these birds very much resemble our siskins.

Observations.—These American birds repair in the summer in great numbers to the state of New York; they live on the seeds of different kinds of thistles, like our goldfinches, and eat the same food when caged. They are easily tamed, and sometimes even lay in captivity. Their eggs are of a pearl gray, but I am ignorant whether they are ever productive in confinement.

THE BRAZILIAN FINCH.

Fringilla granatina, LINNÆUS; Le Grenadin, BUFFON; Der Brasilische Fink, BECHSTEIN.

THE length of this bird is four inches and three quarters, the beak is coral red; the iris is dark brown; the eyelids are scarlet; the feet are light gray; the sides of the head round; the eyes are purplish; the upper base of the beak is blue; the throat, the lower part of the belly, and the thighs, are black · the lower part of the head and the rest of the body are chestnut, with a varying brown on the back and shoulders.

The female has a red beak, and a little purple under the eyes; the top of the head orange; the back grayish brown; the throat and lower parts of the body light orange; the lower part of the belly whitish; the rest of the colours differ from those of the male only in being less brilliant.

OBSERVATIONS.—This beautiful species comes from Brazil, and is always very expensive. The form of the beak is nearly the same as that of the goldfinch; the food is also the same; its motions are quick, and its song very pleasing.

THE BLUE-BELLIED FINCH.

Fringilla Bengalus, LINNÆUS; Le Bengali, ou Fringille à ventre bleu, BUFFON; Der Blaubäuchige Fink, BECHSTEIN.

THE length of this bird is four inches and a half, one and a half of which belong to the tail, which is wedge-shaped; the beak is one third of an inch long, flattish at the sides, very sharp, and flesh-coloured; the iris is nut-brown; the feet are light brown; the upper part of the head and body are ash-coloured, varying to purple; the sides of the head, the lower part of the neck, the breast, the belly, and the rump, are light blue. The female has no mark under the eyes. The varieties which are observable among these birds probably arise from difference of age: some are found gray on the back, and others on the lower parts of the body; and some in which the belly inclines to red.

OBSERVATIONS.—The blue-bellied finch is a native of Africa, and comes principally from Angola and Guinea: it is a pretty lively bird, with a sweet agreeable song. It is fed with canary-seed, bruised hemp, and poppy-seed.

THE LIVER-BROWN FINCH.

Fringilla hepatica, Linnæus; Der Leberfarbene Fink, Bechstein.

This is about the same size as the last, which it somewhat resembles in plumage; but its air and manner are very different. Its length is four inches, of which the wedge-shaped tail measures one and three quarters. The beak is like that of the sparrow in form, of a blood-red colour, tipped with black; the eyelids are yellowish and bare; the iris is reddish brown; the feet are flesh-coloured; on the cheeks is a dark purple spot; the throat, half the breast, the sides, and the rump, are of a dirty greenish blue: the upper part of the body is of a dark liver-brown, the belly of a lighter shade of the same colour; the wings are of a deep brown, with the edges of the pen-feathers of the same colour as the back; the under side tending to blue, with black tips. I do not know the female.

Observations.—This species inhabits the shores of Africa; it is very lively, and its call is "*tzä*." Its weak but sweet song resembles that of the wood wren. It is fed on canary-seed.

THE ANGOLA FINCH.

Fringilla Angolensis, Linnæus; La Vengoline, Buffon; Der Angolische Hänfling
Bechstein.

This, in form and habits, very much resembles our redpole. Its length is four inches and a half, of which the forked tail contains one and three quarters. The beak is short, and not flattish, blunt at the tip, and of a dingy flesh-colour; the feet are flesh-coloured; the circumference of the beak is black; that of the eyes, with the sides of the throat, is spotted with white; the top of the head, the upper part of the throat, the back, and the little coverts of the wings, are of a brownish ash-colour.

Observations.—Angola is the native country of this bird. As to the song it is sweet and flute-like, very like that of the linnet, but more melodious. It is fed with rape and canary seed. The young males have the same plumage as the females

THE GREEN GOLDFINCH

Fringilla Melba, LINNÆUS; Le Chardonneret vert, BUFFON; Der grüne Stieglitz, BECHSTEIN.

THIS bird is exactly of the form of our common goldfinch. Its length is four inches and a half, of which the tail measures one and a half. The beak is half an inch long, and of a carnation colour; the iris is chestnut; the feet gray; the front of the head, the back of the eye, and the throat, are of a bright red; the bridle is ash-colour; the upper part of the head, the neck, and the back, are yellowish green.

The female has a light yellow beak, the top of the head and the neck ash-colour; the little coverts of the wings and rump yellow-green; the feathers of the tail brown, edged with pale red; the rest like the male.

OBSERVATIONS.—This species is found in Brazil. The male pleases the ear by his song, as much as the eye by his plumage. It appears that by feeding them simply with rape and canary seed they may be preserved healthy for many years.

WARBLERS

The characteristics of this group are a conical beak, sometimes tending to cylindrical, sharp, generally weak, and the upper mandible fixed. Insects are the food of the greater number; some also feed on berries and worms. The nests are for the most part well made, and the male sits alternately with the female.

THE SKY-LARK.

Alauda arvensis, LINNÆUS; L'alouette, BUFFON; Die Felderche, BECHSTEIN.

This bird is very generally known. Its length is seven inches, of which the tail contains three. The beak is weak, straight, cylindrical, and terminating in a point; the mandibles are of an equal length, the lower one whitish, the upper black horn colour; the iris is grayish brown; the feet of the same colour, but yellower in the spring; the height of the shanks is nearly an inch, and the hind claw is much longer than the hind toe itself.

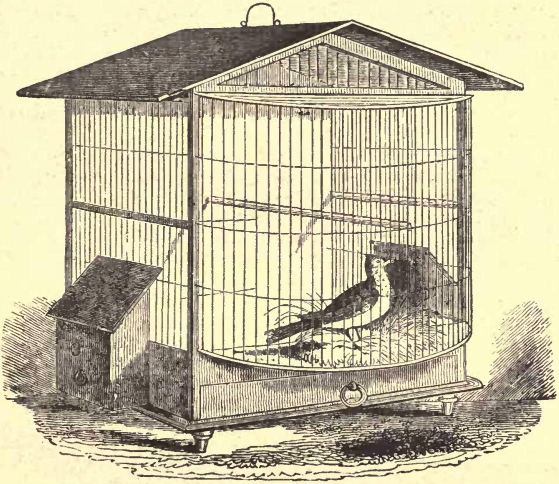
The female is distinguished by its smaller size, by the absence of the white line round the cheeks, by the great number of black spots on the back and breast, and by the purer white of the breast.

In the house we sometimes meet with the two following varieties:—

1. *The white lark*, which is either clear white or yellowish white. He is occasionally found wild.

2. *The black lark.* The whole body of this variety is black with a rusty tinge, and the belly feathers are edged with white. I am ignorant whether this variety has ever been found wild; but it is not uncommon in dwelling houses, especially when the cages are fixed in a dark place where the rays of the sun cannot penetrate; in moulting, their colour passes away to give place to the primitive plumage, which never happens to the white variety.

HABITATION.—In a wild state, the sky-lark is found almost all over the world, frequenting fields and meadows, and by preference plains. It is a bird of passage which generally arrives in our regions in the beginning of February, and departs in great flights in the month of October *. No bird of passage returns so soon as the lark; but as it lives not only on insects, but eats all kinds of seeds and even grass, it can seldom be in want of provision even in the severest weather.



In rooms, it is common to let it hop about, giving it a retired corner to sleep; it is, however, also kept in cages, where it sings best. Whatever form may be given to these cages, they must be at least eighteen inches long, nine wide, and fifteen high; the bottom should have a drawer in which enough of river sand should be kept for this scratching bird to be able to roll and dust itself conveniently. It is also a good plan to have in a corner a little square of fresh turf, which is as beneficial as it is agreeable. The top of the cage must be of linen, since, from its tendency to rise for flight, it would run the risk of wounding its head against a covering of wood or iron wire, especially before it is well tamed. The vessels for food and drink must be outside, or, which I prefer, a drawer for the food may be introduced in the side of the cage: sticks are not necessary, as the lark does not perch. When it is allowed to hop free in a room, the latter

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* In Britain it is partly migratory and partly stationary.—TRANSLATOR.

must be very clean and neat, otherwise a thread or hair may entangle the feet, and if not removed it easily cuts the skin, maims the bird, and the entangled toes shrink and fall off.

Food.—When wild, the food consists of insects, especially ants' eggs; also of all kinds of seeds, and in autumn of oats, which these birds skin by striking them against the ground, their beak being too weak to shell them alone. In the spring the sprouting seeds and young buds, also the blades of young grass, are eaten, and grains of sand help their digestion.

In the house, if the lark is hopping about, nothing is better than the first universal paste described in the Introduction ; but if caged the second will suit it better. Poppy-seed, bruised hemp, crumb of bread, and plenty of greens, as lettuce, endive, cabbage, or water-cress, according to the season, must be added. A little lean meat and ants' eggs are favourite delicacies, which make it gay and more inclined to sing. When old larks are first made prisoners, they must be fed only with oats and poppy-seed to reconcile them to captivity.

Breeding.—The lark lays but once a year in cold countries, twice in the temperate, and three times in the warmer climates. Its nest, formed on the ground in a little hollow, is made without much art of straw, and the wool and hair of animals, and by preference in hollow ground or among the summer crops of grain. The eggs, in number from three to five, are of a whitish gray, spotted and dotted with dark gray ; incubation lasts fourteen days. By the end of April the young are often hatched, and are at first only fed with insects, and leave the nest before they can fly ; but they nevertheless continue to be fed by the mother till they can follow her in her excursions. Before the first moulting all the upper part of the body is dotted with white ; if it is wished to take nestlings, they must be removed from the nest when the tail is about three quarters of an inch long. They are fed with crumb of white bread, and poppy-seed steeped in milk some ants' eggs or a little minced lean meat will be a wholesome addition. The males are soon distinguished by their yellow colour. If it is intended to teach them to perform a tune, their instructor must commence before they are ready to fly, for by that time they already begin to record their natural song. They must also be completely separated from other singing birds, otherwise the great flexibility of their organs, joined to their memory, will infallibly cause them to adopt the song of such birds as they are near ; and even old larks, brought into my bird-room, have learnt to imitate perfectly the nightingale and chaffinch. They vary, however, very much in this respect. Some females in confinement lay without the presence of a male, and others pair, but I have never yet succeeded in making them sit. One of my neighbours, notwithstanding the greatest care, has succeeded no better, though he had a female which laid from twenty to twenty-five eggs annually. There would undoubtedly be a better chance of success in a large garden aviary*.

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* If it is difficult to induce larks to sit, it appears to be very easy to make them take care of a young brood.

" The instinct," says Buffon, " which induces hen larks to bring up and watch over a brood appears sometimes very early, even before that which disposes them

Diseases.—Besides those which have been named in the Introduction, these birds are very subject to a kind of scurf or yellow crust round the base of the beak. The best remedy is to take care that they have good food; the second universal paste agrees with them particularly well; but greens, ants' eggs, meal-worms, or other insects, must be added. With this food they may be preserved healthy for many years in the house. Instances have been known of larks which have lived in this way for thirty years.

Mode of Taking.—It would take too long a time to describe all the modes of catching larks which are in use. It is enough to say that with day and night nets, known by the name of lark nets, so large a number of these birds are taken alive in the open country, that it is easy to have a choice of both males and females. This lark snaring is accomplished by placing a considerable number of nets perpendicularly like walls, which are called day-nets, towards which, in the dusk, the birds are forced by means of a long rope, which is drawn along the ground, and drives them forward; in the night a square net called a night-net is carried to a spot where it is known that many larks are collected in the stubble, and there they are covered just when they begin to flutter.

If, in the spring, it is wished to procure a good singing male, for some are better than others, a lark whose wings are tied, and with a little forked lime-twig fixed to its back, must be carried to the place where such a bird is to be found. As soon as it is let loose, and the desired male has perceived it from high in the air, he will fall upon it like an arrow and attack it; but soon, the dupe of his jealousy, he will find himself caught by the lime.

Attractive Qualities.—The very pleasing song of the sky-lark consists of several stanzas or strains, composed entirely of trills and flourishes, interrupted from time to time by loud whistling. I have already said that the lark has great abilities for learning. The young readily imitate the notes of all the birds in the same room with them, and the old sometimes succeed also: this, however, is not general; for among birds as among

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to become mothers, and which, in the order of nature, ought, it would seem, to precede it.

"In the month of May, a young lark was brought to me which could not feed itself; I fed it, and it could hardly peck up, when a brood of four young ones of the same species was brought to me from another place. She exhibited a singular affection for these new comers, which were not much younger than herself; she nursed them day and night, warmed them under her wings, and pushed the food into their mouths with her beak; nothing could distract her from these interesting duties. If she was removed from the young ones, she flew back to them as soon as she was free, without ever thinking of escaping, as she might have done a hundred times. Her affection increased so much that she literally forgot to eat and drink; and she lived only on the food which was given to her as well as to her adopted young, and she died at length, consumed by this sort of maternal passion. None of the young survived her, they died one after the other, so necessary had her maternal cares become to them; so entirely were these cares produced by affection, and reciprocated."

This, it appears, is more than could be said of the persons who had the care of these unfortunate little birds.—Translator.

men, memories vary in power. Some have a stronger and more melodious voice; there are some which, in confinement, begin to sing as early as December, and continue till they moult; while others, less lively, delay till the month of March, and cease to sing in the month of August. In its wild state, the lark begins to sing in the first fine days of spring, the season of pairing, and ceases at the end of July; this, however, is not without exceptions, as some individuals continue till the end of September. It belongs to the small number of birds which sing as they fly, and the higher it rises the more it appears to elevate its voice, so that it may be heard when it is out of sight. In the country, it very seldom sings when on the ground; in the room it often does, and with ease, and it becomes so tame as to come and eat from the table or the hand.

THE CRESTED LARK.

Alauda cristata, Linnæus; Le Cochevis, ou la grosse Alouette huppée; Die Haubenlerche, Bechstein.

This bird is stronger than the sky-lark, and its colour is lighter, but its length the same. The beak is lead-coloured, and brown at the point, is also rather longer; the iris is dark brown. The shanks are an inch high, and yellowish gray; the head, the cheeks, the upper part of the neck to the upper part of the back, are of a reddish gray, caused by the wide red edges of the feathers, which are brown in the middle; a reddish white line, hardly perceptible above the eyes, but very distinct beyond, extends from the nostrils to the ears; eight or ten long-pointed blackish feathers rising on the head form a beautiful perpendicular crest.

The crest of the female is lower, but her breast is covered with more numerous and rounder spots than the male.

Habitation.—When wild it is only in autumn and winter that they appear in Saxony in small or large flights, beside the high roads, on dunghills, near barns and stables, among sparrows and yellow-hammers; they are also found all over Europe, from Sweden to Italy *; in summer, they frequent the thickets and bushes of the plains, fields, and meadows, or they inhabit the hollows of ditches, paths in woods, and elevated villages. They depart in October.

In the house they may be kept in cages, like the sky-lark, or be left to run about. I know no bird whose feathers grow so quickly; if the wings are kept clipped, this must be repeated every three or four weeks, as by that

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* They are not natives of Britain.—Translator.

time they are so much grown that they may serve for flying about the room.

Food.—When wild this bird lives, like the sky-lark, on insects, different sorts of seeds, and oats. In the house it is fed with the same things, but it becomes more robust and healthy than the sky-lark.

Breeding.—This species forms its nest on the ground, under little dry bushes, under garden vegetables, on clay walls, and even on thatched roofs. The eggs, in number from four to five, are of a rusty gray, shaded and spotted at the upper end with dark brown. The first plumage of the young before moulting is variegated white. They are taken from the nest when the feathers are half grown to be tamed and taught airs, or to have them instructed by other birds whose song is admired; they learn every thing with the greatest ease.

Diseases.—They are the same as those of other larks. A lousy disease may be added. I possess two male crested larks, one of which has hardly any of the lice which so commonly torment birds, whilst the other, which is nevertheless as gay and musical, is so covered with them that he cannot be touched without having the hand filled with these nasty insects. He has been with me four years, and though he has maintained for a long time millions of these parasites, he continues in good health, which I attribute to his abundant supply of good food.

Is this produced by a difference in the cleanly dispositions of these two birds, or is it a constitutional difference?

Mode of Taking.—When, in winter, any spot has been remarked which the larks prefer, a place must be cleared from snow, some oats and poppy-seed be thrown upon it for a bait, and limed twigs, nets, or even a simple gauze, be conveniently arranged, and soon plenty will be caught.

Attractive Qualities.—The song of the crested lark is, in my opinion, very inferior to that of the sky-lark; it seems composed of the warbling of that and of the linnet; this bird sings also in the night. Its time of singing lasts from February to August, but longer in those birds which have been tamed from the nest. It has not the tottering gait of the sky-lark, but runs nimbly, and moves its crest in the most expressive way. It is rather quarrelsome, and has the peculiarity that when it fights it continues to sing.

THE WOOD-LARK.

Alauda arborea, Linnæus; Le Cujelier, ou L'Alouette des Bois, ou La Loulou, Buffon; Die Waldlerche, Bechstein.

This charming species is one-third smaller than the field-lark, and resembles it much in form and gait. The beak is black above, brown below, tending to carnation at the tip. The shanks, three quarters of an inch high, are of a brownish flesh-colour. The top of the head is reddish brown, with four dark brown lines; its long feathers render the head large, and they may be raised at pleasure into a crest, which from eye to eye is surrounded by a whitish ash-coloured line The tail is very short.

The female, more beautiful, is of a paler ground, with darker ornaments; her breast more spotted; the crest on her head more prominent, and the line round the cheeks more distinct. It is a well attested observation made on all our indigenous species, that the individuals with the most spots on a lighter ground, and of a clearer white, are certainly females.

HABITATION.—When wild these birds inhabit the temperate regions of Europe, in summer the woods of the plain, near fields and meadows, and in the woods of the hills they alternate between heaths and pasture lands. After breeding time they assemble in small flocks of ten or twelve. They are thus found in the stubble, at their departure in October, and their return in March.

In the house I prefer letting them run about, because my experience shows that they sing better in this way than when caged. They must be well supplied with river sand, as well to roll and dust themselves as to pick out grains necessary for their digestion.

FOOD.—When wild, in summer, the food consists of insects; in autumn, of rape, millet, seed, and oats; in spring, before they can find insects and worms, they are satisfied with the young buds of herbs, water-cresses, and, on an emergency, with the buds of the filbert.

In the house, as this species is more delicate than the preceding, it is well to vary the food, and to give it occasionally, independent of the universal paste, poppy-seed, oats, hemp, sprouting wheat, fresh curds, fresh and dried ants' eggs, minced ox heart, meal worms, and the like. When one of these birds is caught by the net or otherwise, the best things to induce it to eat when it reaches the bird-room are poppy-seeds and ants' eggs.

I have seen two wood-larks which had been kept in a cage for eight years, very healthy and gay, with their feet quite free from disease, and singing perfectly. Their food consisted of crumbs of white bread and pounded hemp-seed mixed together; a piece of white bread, enough for the day, soaked in milk, which was poured boiling over it every morning, was also furnished; and finally, some ants' eggs, given two or three times a day as a treat. The bottom of the cage was also covered with sand, which was changed regularly every day, as well as the water. They were always kept in summer outside the window, exposed to the free air, screening them from the sun by covering the top of the cage with a sheet of paper or piece of linen by way of parasol. The success of this mode of treatment sufficiently proves its advantage. The cage was furnished with two bars, because the wood-lark perches.

BREEDING.—The wood-lark builds among the heath, under juniper bushes, in hedges, high grass, or under a green hillock in fields near the woods, or in copse wood. The nest is made of dry blades of grass, mixed with moss, wool, and hair. The eggs are variegated with light gray and brownish violet. The young may be bred up with bread soaked in milk and ants' eggs. They readily learn the different songs of the birds with which they are imprisoned; but this medley is less agreeable to me than their natural song.

Diseases.—To the list of diseases already given, to which the wood-lark may be subject, I must add one which is peculiar to it. This attacks the feet and renders them extremely brittle. I cannot too strongly recommend to clean them carefully from everything which might entangle them; a single hair may cut them, so that the toes shrivel, or ulcerate and fall off. They become so brittle with age, that with all my cares I could never keep any beyond four years; the least thing breaks them. Most of the wood-larks which I have had perished from broken legs; and this peculiarity I have remarked in no other species of bird.

We see from these instances, that if birds allowed to hop about a room enjoy more space and free exercise, they are also subject to more inconveniences and disadvantages than caged birds. Their food is neither so appropriate or regular; they cannot be kept so clean; their feet are almost inevitably injured; and lice devour them, without the power of prevention.

Mode of Taking.—The wood-lark may be caught on the nest by means of limed twigs; but as it is very cruel to separate a pair, and thus to destroy a whole family, it is better to wait till autumn, and to use the night-net. They may be caught early in the spring, when there is snow on the ground, by placing limed twigs or nets in cleared places. This is the best method of catching them. It is true that this plan will not succeed in all years; but another may be substituted, if we have a decoy wood-lark, by placing it under a folding net, in a field frequented by a flight of this species, which will not fail to join it. The same means also may be used as with the chaffinch, namely, by tying the wings of a wood-lark with a limed twig on his back, and letting him run to the place where there is a male of the same species. By this means the bird-fancier may obtain whatever kind of singer he prefers.

Attractive Qualities.—Of all the species of larks the wood lark has the finest song, and to my taste it is, of all our indigenous birds (always excepting the nightingale), the one whose natural notes are the most delightful. Its clear flute-like voice executes a sonorous, tender, and somewhat melancholy air. In the country it rises from the tops of the trees so high in the air that the eye can scarcely discern it. and there remaining stationary, the wings and the tail expanded, it sings uninterruptedly for hours together; it sings in the same manner when perched on a tree.

In the house, it is from a retired corner, tranquil and motionless, that it utters the different modulations of its beautiful voice. The singing time in its wild state is from March to July; in the house, from February to August. The female, like other larks, sings also, but her strains are shorter and less sustained. These birds appear to be subject to whims: I have seen some which would never sing in a room or in the presence of an auditor. These perverse birds must be placed in a long cage outside the window. I have remarked that in general these obstinate birds are the best singers. Their abrupt step and various frolics, in which they raise the feathers of the head and neck, are also very amusing.

THE TITLARK.

Antaus arboreus, BECHSTEIN; L'Alouette Pipi, BUFFON; Die Waldpieper BECHSTEIN.

THIS is the smallest of our larks; its length is but five inches and a half, two and a half of which belong to the tail, which it carries and moves like a wagtail, and by this characteristic it seems to stand intermediate between the larks and the wagtails. The sharp beak is dark brown above and whitish below; the iris is brown. The shanks are three quarters of an inch high, and light flesh-coloured; the angle of the hind toe is short and crooked. The head, rather oval than round, is, with the neck, back, rump, and sides, of an olive brown with black wavy spots.

The female differs from the male only in the paler yellow of the throat, neck, and breast; the white spot in the second tail-feather is also smaller, and the two transverse bands on the wings are whiter. The young males of the first year have the under part of the body of a lighter yellow than those which are older.

HABITATION.—When wild, with the exception of the most northern parts, this species is found all over Europe. They build in great numbers in Germany and England, in mountainous and woody places, and establish themselves by preference on the skirts of forests, in fields, and orchards, in their neighbourhood, or in the cleared parts of woods. In the month of August they arrive in small flights in fields and enclosures planted with cabbages, where caterpillars abound. In September they pass into the oat fields, and in October they are caught in the nets with the common larks. The time of their return is about the end of March; and if the cold is severe they collect by thousands in damp fields and near warm springs. One peculiarity of this species is the having during the rest of the year a call different from that of the breeding season. It no longer perches on trees and bushes, but remains on the ground, crying "*pitt*, *pitt*," (or rather, I think, "*guik*, *guik*,") while in the sitting time the cry is more tender, expresses more solicitude, "*tzip*, *tzip*," and is heard only in the immediate neighbourhood of the nest. As soon, therefore, as this cry strikes the ear, we may be sure the nest is not far off; and if the young are hatched we shall soon see the father or mother with a beakful of insects, redoubling and increasing the cry as they approach their precious charge. The other cry of "*pitt*" or "*guik*" is never heard at this season; whence it happens that sportsmen and bird-catchers make two species of this same lark; one they name the heath lark, whose call in the woods is "*tzip*," and the other the cabbage lark, which in the fields calls "*guik*." I have never been able to convince these people of their error, but by showing them in my bird-room the same lark which called "*guik*" in the autumn and winter, and "*tzip*" in the summer. We may judge by this circumstance how many mistakes and errors may slip into natural history, when in the determination of species we meet with things which we can neither see nor verify.

In confinement, I have been accustomed to let the calling lark range freely among my other birds, because I would not trouble myself to give it a particular cage. I own, however, that it would be better so circumstanced, on all accounts, as well in regard to its health as its song. This cage should be long, like that of the sky-lark, and furnished with two sticks, because this kind perches.

Food.—When wild, the food consists of all sorts of flies, grasshoppers, caterpillars, butterflies, beetles, and ants' eggs.

In confinement, as it is the most delicate of its species, the food must be frequently changed and varied. Besides the universal paste, we should sometimes give it the common food of the nightingale, sometimes bruised hemp, mouldy cheese, meal worms, and ants' eggs.

It is very difficult to accustom it to take the food of the bird-room. As soon as it arrives, we must throw it some meal worms, ants' eggs, or caterpillars; as soon as these are eaten, some must be mixed with the universal paste and with all its food; it will thus insensibly grow accustomed to the common food.

This lark does not roll in the sand, and dust itself like the others, but it thrusts its beak into water and sprinkles itself; another indication of its approximation to the wagtail, as was mentioned above.

Breeding.—The titlark lays twice a year. The nest, placed on the ground in a cleared part of the woods, or under a bush or hillock, in a tuft of grass, in a field or orchard, is made in the simplest manner; coarse hay outside and finer within, with some wool and hair, are all the materials. The eggs, in number from four to five, are gray mottled with brown; the young escape as soon as possible, having but too many enemies to fear on the ground.

They may be brought up with ants' eggs and white bread soaked in boiled milk, to which a few poppy-seeds are added. They easily learn to imitate the songs of the birds in the same room with them, especially that of the canary, without however attaining any great perfection.

Diseases.—Independent of those which are common to the other birds of its species, it is particularly subject to the loss of its feathers out of the moulting season; if it is not at once supplied with food more nutritious, and better suited to its natural habits, as ants' eggs, meal worms, and other insects, it soon dies of atrophy. At the best it can only be preserved five or six years *.

Mode of Taking.—To take the bird from its nest by a limed twig, and thus destroy the young family by hunger and misery, is a cruelty which none but a harsh insensible amateur could resolve upon. I prefer using the night-net in autumn; this bird is also caught in the water-trap in August and September.

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* I possessed a fine one which died from lice.—Translator.

Attractive Qualities.—The song of the titlark, though short, and composed of only three strains mixed with shakes and trills, is nevertheless very pleasing. It sings from the end of March to July, either from the top of a tree, where it is perched, or when rising perpendicularly in the air, where it remains a few minutes and then quietly descends, almost always to the same place. As it alights it repeats several times "*tzia, tzia, tzia.*" In the house it begins to sing a month earlier. It pleases also by its pretty ways; its step is somewhat grave, and the tail is in perpetual motion: it is always very clean and trim.

THE FIELD PIPIT

Anthus campestris, Bechstein; La Spipolette, Buffon; Die Brachpieper, Bechstein.

In figure it is more slender than the sky-lark; the plumage resembles that of the crested lark, and the form that of the titlark. .Its length is six inches and a half. The beak is strong and long, the line above the eyes distinctly marked, the breast yellowish white, with but few rays or lines. In summer it frequents marshy woods, in autumn the edges of the fields, high roads, and meadows, where it may be easily caught with the night-net. Its only known song is its constant cry "*tsirru*" and "*datsida*" while revolving in the air. It departs in September and returns in April. Its food is the same as that of the titlark; it also requires the same treatment when in confinement if it should be wished to keep it, but it has no qualities to make this desirable.

THE SHORE LARK.

Alauda alpestris, Linnæus; Alouette Haussecol noir, ou Alouette de Virginie, Buffon; Die Berglerche, Bechstein.

This species is seven inches long, rather stronger than the field pipit, and has the same plumage on the upper part of the body; but the throat is light yellow, as well as the rest of the under part of the neck, over which and the top of the breast passes a black band, which in the lower part is shaped like a horse-shoe. The beak, feet, and claws, are black.

Observations.—This species properly inhabits the north as well of Europe as of America, as far as Virginia; but in the winter it appears in

Germany, where it may be seen by the road side picking for its food the undigested grains in horse-dung. It perches like the wood-lark. It is caught in the southern parts of Thuringia with lime twigs, or nets, at its return in March, when there has happened a heavy fall of snow; but at such times it is so thin and so weak for want of food as scarcely to have strength to eat what is offered to it. It may, no doubt, be preserved in confinement by treating it like other larks, but of this I have no experience, never having been able to procure a single living individual of this species, which also prevents my speaking of its song.

THE CALANDRA LARK.

Alauda Calandra, LINNÆUS; La Calandre, BUFFON; Die Kalander, BECHSTEIN.

LARGER than the common lark, the Calandra is also furnished with a shorter and stronger beak, which enables it to shell its grain; in other respects the plumage, the form, and manners, are the same, the only difference being a very distinct and apparent spot on the lower part of the neck. The male is distinguished by being larger and blacker round the neck; the female has a very narrow collar, and sometimes none at all; some individuals, old ones doubtless, have a large black mark at the top of the breast. The tail is black, according to Linnæus, while in the preceding it is brown.

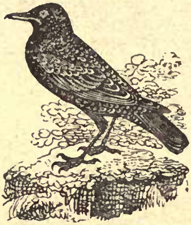
HABITATION.—It appears that this species has much resemblance to the preceding; but it does not inhabit the North; it is found in Syria, Italy, Sardinia, and Provence: it is also said to frequent Carolina, in America.

In confinement it must be furnished with a long cage, the top made of linen, because it hops and jumps about a great deal, especially at first. It must be fed like the other larks.

BREEDING.—It builds on the ground like the sky-lark, and lays four or five eggs. In order to have calandras which sing well, they must be bred up from the nest, and be fed in the same manner as the young of the sky-lark species; this is how they breed them in Provence.

MODE OF TAKING.—In the countries where it is found, the plan consists in spreading a net near the water where it drinks; this method is considered the best.

ATTRACTIVE QUALITIES.—Its song is so admired in Italy, that "to sing like a calandra" is a common expression for to "sing well." It also possesses the talent of imitating, like the skylark, the songs of many birds, such as the goldfinch, the linnet, the canary, and even the chirp of young chickens, the cry of the cat, in short, all sounds adapted to its organs, and which may be acquired when they are flexible.



THE STARLING.

Sturnus vulgaris, Linnæus; L'Etourneau, Buffon; Der gemeine Staar, Bechstein.

The length of this bird is eight inches and a half, two and a half of which belong to the tail, and one to the beak, which is awl-shaped, angular, flattish, and rather blunt, yellow, brown towards the end, and the tip blue. The iris is nut-brown; the claws an inch long, are deep flesh-coloured. All the plumage is of a blackish hue, changing to purple towards the front of the body, and to green towards the hind part, and on the wing-coverts. The old males are darker, having no white tips to the feathers of the head, cheeks, throat, or belly.

The beak of the female is rather brown than yellow; the light spots on the head, neck, and breast, are larger, and the edge of the feathers is wider, which gives it a lighter and more speckled appearance.

The starling, like all other species, has its varieties: such are the white, the streaked or variegated, the white-headed, that whose body is white with a black head, and the ash gray.

Habitation.—When wild the starling is found all over the old world. It prefers forests and little thickets, surrounded by fields and meadows; it is often seen, especially in spring, on towers, steeples, and churches; but it is never found either in high mountains or ridges. In our climate, it departs, in October, in great flights for the south, and returns in like manner in the beginning of March. During the journey, these birds pass the night among the rushes, where, on the least alarm, they make a great tumult.

In confinement it would be very amusing to let them run free; but let them be ever so neat themselves, they would render the room dirty. When caged, they must be furnished with a cage at least two feet long, and one and a half both in height and width. Very restless and always in motion, they require sufficient space to take exercise and keep their plumage uninjured.

Food.—When wild they eat not only caterpillars, snails, worms, insects, and the flies which torment the cattle in the field; but also cherries, grapes, berries of all sorts, and different sorts of grain, as millet and hemp seed.

In confinement they eat meat, worms, bread, cheese, the universal paste, indeed, any food, provided it is not sour. When first caught, they are supplied with earth and meal-worms, and they soon become as tame as if they had been brought up from the nest; but, as there is no rule without exceptions, we sometimes meet with individuals which obstinately refuse to eat, whatever pains may be taken to induce them, and which die of hunger. This bird delights in bathing often, it must therefore never be left without fresh water in a proper vessel.

Breeding.—The starling builds in the holes of trees, and even in boxes, or pots with long necks, suspended to trees, or under the roof, or in pigeon-houses. Its simple nest is composed of dry leaves, hay, and feathers. Like the swallow it returns to the same nest every year, only taking care to clean it out. It lays twice in the year, seven eggs each time, whose colour is ashy green. The young, before moulting, are of rather a yellowish soot colour, than pure black. The beak is dark brown; those which are bred from the nest, and which are easily reared on white bread soaked in milk, repeat the airs they are taught in a stronger and more distinct manner than bullfinches and linnets. They can, indeed, repeat a succession of couplets without changing or mixing them. In Voigtlande, the peasants use the starling like domestic pigeons; they eat the young, which they take before they can fly; by this means they obtain three broods, but they do not touch the last, both in order not to discourage and drive away the father and mother, and not to diminish this branch of economy.

Starlings have been seen to build in dwelling-houses, in an earthen vase with a long neck, appropriated to the purpose *.

Diseases.—I know none peculiar to them. These birds will live ten or twelve years in confinement.

Mode of Taking.—It is principally in autumn, and in places filled with reeds, that the bird-catchers take great numbers of starlings in nets prepared for the purpose. They may also be procured by means of an osier fish-net, placed among the reeds, which they frequent in the evening, and baited with cherries. Though this means is limited, as many as a hundred have been procured by it in one night.

In Thuringia it is never attempted to catch them for the house except in the month of March, when snow falls after their arrival. For this purpose limed twigs are put in places cleared from snow, and beside swampy ditches, with some earth-worms for a snare, into which they fall as easily as chickens.

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* I saw a colony of starlings established on this plan at an inn at Leyden.—Translator.

ATTRACTIVE QUALITIES.—The starling becomes wonderfully familiar in the house; as docile and cunning as a dog, he is always gay, wakeful, soon knows all the inhabitants of the house, remarks their motions and air, and adapts himself to their humours. In his solemn tottering step, he appears to go stupidly forward; but nothing escapes his eye. He learns to pronounce words without having his tongue cut, which proves the uselessness of this cruel operation. He repeats correctly the airs which are taught him, as does also the female, imitates the cries of men and animals, and the songs of all the birds in the room with him. It must be owned that his acquirements are very uncertain: he forgets as fast as he learns, or he mixes up the old and new in utter confusion; therefore, if it is wished to teach him an air, or to pronounce some words clearly and distinctly, it is absolutely necessary to separate him from other birds and animals, in a room where he can hearnothing. Not only are the young susceptible of these instructions, the oldest even show the most astonishing docility.

THE BOHEMIAN CHATTERER.

Ampelis garrulus, LINNÆUS; Le Jaseur de Bohème, BUFFON; Der gemeine Seidenschwanz, BECHSTEIN.

THE length of this bird is eight inches, one and a quarter of which belong to the tail. The beak is three quarters of an inch long, black, short, straight, arched above, and large at the base, forming a large opening when the mandibles are separated; the iris is brown; the shanks nearly an inch high, and black. The whole body is covered with soft silky feathers; those at the top of the head are long, and rise in a crest; the head and the rest of the upper part of the body are of a reddish ash-colour, changing to gray at the rump; the middle coverts are dark ash gray, with the ends white also, besides which, the shaft of many has a horny tip, shining and red, like a little oval bit of sealing-wax. The female has at most but five of these waxen tips to each wing, while the male has from five to nine; the tail is black, terminated with primrose yellow; very old males have also upon it narrow red wax tips.

In the female, the black spot on the throat is smaller; the yellow at the end of the tail is also narrower and paler; the tips of the wings are of a yellowish white; lastly, the horny appendages are small, and often they do not appear at all.

Habitation.—When wild it does not build in Germany, but within the Arctic circle; it is found in Thuringia only in the winter, and if the season is mild in very small numbers, the greater portion remaining in the north; but in severe cold it advances farther south. In moderate seasons it is found in great flights in the skirts of the forests throughout the greater part of Germany and Bohemia.

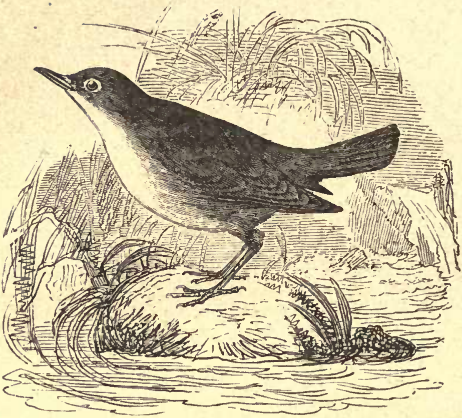
In confinement, it is generally kept in a grated corner, where it may run about freely with the other birds which are also placed there, taking care to keep it at a distance from the stove, the heat of which is so distressing that it opens its beak and breathes with difficulty; this proves that a warm climate is not congenial to the bird. If kept in a cage, it requires one as large as the thrush; and, as it is a very dirty bird, the bottom must be regularly covered with a sufficient quantity of sand.

Food.—When wild we see it in the spring eating, like thrushes, all sorts of flies and other insects; in autumn and winter different kinds of berries; and, in times of need, the buds and sprouts of the beech, maple, and various fruit trees.

In confinement the two universal pastes appear delicacies to it; and it is even satisfied with bran steeped in water. It swallows every thing voraciously, and refuses nothing eatable, such as potatoes, cabbage, salad, fruits of all sorts, and especially white bread. It likes to bathe, or rather to sprinkle itself with water, for it does not wet itself so much as other birds.

Mode of Taking.—It is taken in nooses, to which berries are fixed, which, for this purpose, should always be kept in store till February; attracted by the bait it falls into the snare. It appears to be frightened at nothing, for it flies into nets and traps, though it sees its companions caught and hanging, and uttering cries of distress and fear.

Attractive Qualities.—Nothing but its beauty and scarcity can render the possession of it desirable: for it is a stupid, lazy bird. During the ten or twelve years that it can exist in confinement, and on very meagre food, it does nothing but eat and repose for digestion. If hunger induces it to move, its step is awkward, and its jumps so clumsy as to be disagreeable to the eye. Its song consists only of weak and uncertain whistling, a little resembling the thrush, but not so loud. While singing, it moves the crest up and down, but hardly moves the throat. If this warbling is somewhat unmusical, it has the merit of continuing throughout every season of the year. When the Bohemian chatterer is angry, which happens sometimes near the common feeding-trough, it knocks very violently with its beak. It is easily tamed, but is agreeable only by its beautiful colours, for it is very dirty. It is the greatest eater among birds that I know, being able to devour in a day a quantity of food equal to its own weight. It consequently passes hardly half digested, and, what is very disgusting, it is seen, like the ostrich, to eat again this excrement, if it is destitute of fresh food. I have observed it in this way swallow three times juniper berries which I had given it. In consequence of this voraciousness it must be cleaned very often to be kept sweet



THE DIPPER.

Cinclus aquaticus, BECHSTEIN; Le Merle d'Eau, BUFFON; Der Wasserschwätzer, BECHSTEIN.

THIS bird resembles the starling in size, but the head is more pointed, and the body, in general, larger, while the wings and tail are shorter, the tail being only one inch and a quarter long, and the ends of the wings cover a fourth part of it; the beak is three quarters of an inch long, narrow, flattish at the sides, raised in the middle, sharp and black; the narrow nostrils are almost entirely closed by a membrane; the iris is light brown; the shanks are an inch high, and of a dark brown, and have the four toes united together; the head and upper part of the neck are of a dusky rust brown; the rest of the upper part of the body is black, with an ashy gray tint; the quill-feathers and tail are blackish; the neck to half-way down the breast is pure white; the rest of the breast is deep maroon, which shades into the black of the belly.

In the female the head and upper part of the neck are lighter, and the white of the breast is not so pure as in the male.

HABITATION.—When wild it frequents by preference the banks of rivers and streams in mountainous countries, and remains all the year near those whose waters flow from springs which never freeze.

In confinement it has a cage like the thrush, unless it is by preference allowed to run about the room.

Food.—When wild it feeds upon aquatic insects, worms, and even small fish, which it is said to seize by diving.

In confinement it becomes insensibly accustomed to one of the universal pastes, by at first giving it worms, and the eggs of ants and flies.

Breeding.—The female lays from four to six eggs in a rather large nest, which she places in a crack of the rocks at the edge of the water, or in dikes under mill-dams, the wooden gutters of mills, or between the wings of old water-wheels which are not in use. The young may be reared on meal-worms, ants' eggs, and white bread soaked in milk. It is just as well not to take them till they are ready to fly.

Mode of Taking.—Each pair has a chosen spot, which it seldom leaves: and they are generally seen there either on a trough, a stone, dike, or a bush growing near; by fixing close to these places limed twigs, to which are fastened worms, which writhe about and attract attention, it is very easy to catch them.

As soon as one of these birds is caught and caged, he must be put in a quiet place, be fed with earth and meal-worms, and thus be gradually accustomed to the common food.

Attractive Qualities.—The song of the dipper is not disagreeable; he has, indeed, some very sonorous strains, which in the distance and during winter have a very good effect. He also sings in the night.

THE MISSEL THRUSH.

Turdus viscivorus, Linnæus; *La Draine*, Buffon; *Die Misteldrossel*, Bechstein

This is the largest of our thrushes, being in length eleven inches, three and a half of which belong to the tail. The beak is one inch in length, sharp, dark brown, with the lower base and opening yellow; the iris is brown; the shanks an inch high, and of a pale dusky yellow. All the upper part of the body is a brownish gray, with a reddish tint on the lower part of the back and rump; the sides of the head and the rest of the under part of the body are of a pale yellow, with blackish triangular spots on the breast, and oval spots in all other parts.

The female is generally lighter in all the colours.

Habitation.—When wild the missel thrush is found all over Europe, but more in the north than the south. It lives in forests, especially those of the mountains, and prefers those of fir to oak and beech. In Thuringia it is a bird of passage, disappearing in December and returning in the month of February, provided the weather is fine *.

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* In England it continues throughout the year.—Translator.

In confinement it is common to assign it a grated corner of the room unless a cage is preferred, which must be at least three feet and a half long, and nearly as many high, a size necessary for it to take the exercise suited to its vivacity and petulance, without injuring its feathers. It would be still better if it could be allowed, as other birds of its size, an aviary or room to itself, where its copious excrements would be less troublesome.

FOOD.—When wild it feeds on insects and earth-worms, which it finds in abundance in fields and swamps during the spring and summer; in autumn and winter berries of all sorts make a great addition.

In confinement it is not dainty. The two universal pastes are very well liked, but it will put up with plain oatmeal, or even bran moistened with water. It is thus that our bird-fanciers feed it throughout the year, as well as many other large birds caught in traps, which they are obliged to keep as a lure for the snare. It is true, that if this meagre diet is sufficient to keep it alive, it will hardly serve to enliven it and make it sing; for this purpose it must be better fed, with bread and milk, meat, and other dishes served at table, none of which it refuses; and it must also be allowed to bathe, since nothing does it more good, or enlivens it so much.

BREEDING.—Its nest, which it places higher or lower in the trees of the forest, is formed at bottom of herb-stalks and lichens, in the middle of earth, and in the interior of mosses, fine roots and hay: it lays twice a year, generally each time four greenish white eggs, a little speckled with violet and maroon. The young birds are gray above and very much spotted under, with a wide edge of rusty yellow on the wing feathers. Much less docile and susceptible of instruction than the blackbird, they hardly remember any little thing which they hear continually, but they become so familiar as to sing without difficulty on the hand. They are fed with white bread soaked in boiled milk.

DISEASES.—The commonest disorders of this bird, are an obstruction of the rump gland, constipation, and atrophy *.

MODE OF TAKING.—These birds are taken in autumn with nets and snares, with berries for the bait, and they are caught in great numbers. They may also be taken in February, by placing under the trees on which the mistleto grows, perches with limed twigs. They may also be caught in the water-traps at sunset. Those which are yellowish under the body, being males, are chosen for confinement. During the first days of captivity, they are savage, sulky, and often refuse to eat, so that many perish in this way; those which are saved soon repay the trouble by their songs and familiarity.

ATTRACTIVE QUALITIES.—Perched on the top of a tree in the woods, the missel thrush begins, in the month of February, to utter his melancholy but musical warblings, consisting of five or six broken strains, and continues singing for four or five months. As his song is too loud for the sitting-room, this bird should be placed in a large hall, or his cage should be hung outside a window. He lives in captivity from ten to twelve years. His call very much resembles "*tis, r, r, r.*"

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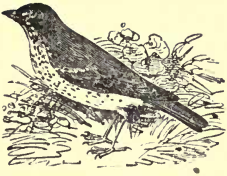
* Bathing may prevent the first; boiled bread and milk administered seasonably relieves, and even entirely cures, the other.—TRANSLATOR.



THE SONG THRUSH.

Turdus musicus, Linnæus; La Grive, Buffon; Die Singdrossel, Bechstein.

We might, with Brisson, name this bird the *small missel thrush*, so much does it resemble the preceding in form, plumage, abode, manners, and gait. Its length is only eight inches and a half, three and a half of which belong to the tail. The beak is three quarters of an inch, horn brown, the under part yellowish at the base and yellow within; the iris is nut brown; the shanks are an inch high, and of a dingy lead-colour. All the upper part of the body is olive brown; the throat is yellowish white, with a black line on each side; the sides of the neck and breast are of a pale reddish white, variegated with dark brown spots, shaped liked a heart reversed; the belly is white, and covered with more oval spots.

In the female the two black lines on the throat are narrower, the breast is lighter, and of a plain yellowish white, and the reddish spots on the wing-coverts are smaller. These slight differences make it desirable for those whose eye is not accustomed to them, to have both sexes before them, if they wish to learn to distinguish them.

The white variety, that with a white head, the streaked, and the ash-coloured, are not very rare.

Habitation.—When wild this species is spread all over Europe, frequenting woods near streams and meadows. As soon as the autumnal fogs appear, they collect in large flights to seek a warmer climate *. The principal time of passage is from the 15th of September to the 15th of October, and of return about the middle or end of March; each pair then returns t its own district, and the male warbles his hymn to spring from the same tree where he had sung it the preceding year.

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* In Britain they remain all the year.—Translator.

In confinement this bird is lodged like the missel thrush, and is much more worthy of being kept, as its voice is more beautiful, its song is more varied, and being smaller it makes less dirt.

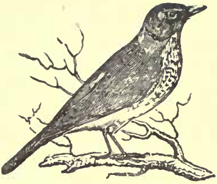
Food.—When wild it lives on insects and berries, like the preceding.

In confinement, oatmeal moistened with milk is a very good food; and it requires also a great deal of fresh water, as well for bathing as drinking. When taken old it is often very difficult to induce these birds to eat, and the greater number die in consequence.

Breeding.—This species generally builds on the lower branches of trees; the nest being pretty large, and formed of moss mixed with earth or cow-dung. The hen lays twice a year, from three to six green eggs, speckled with large and small dark brown spots. The first brood is ready to fly by the end of April. The upper part of the body in the young ones is speckled with white. By taking them from the nest when half-grown they may be easily reared on white bread soaked in boiled milk; and they are easily taught to perform airs. As this thrush builds by preference in the neighbourhood of water, the nest may be easily found by seeking it in the woods beside a stream, and near it the male will be heard singing.

Mode of Taking.—This is the same as for the preceding species and the three which follow; of all the birds for which snares are laid, those for the thrush are most successful. A perch with a limed twig is the best method for catching a fine-toned male. In September and October these birds may also be caught in the water traps, where they repair at sunrise and sunset, and sometimes so late that they cannot be seen, and the ear is the only guide. When they enter the water haste must be avoided, because they like to bathe in company, and assemble sometimes to the number of ten or twelve at once, by means of a particular call. The first which finds a convenient stream, and wishes to go to it, cries in a tone of surprise or joy, "*sik, sik, sik, siki, tsac, tsac, tsac;*" immediately all in the neighbourhood reply together, and repair to the place: they enter the bath however with much circumspection, and seldom venture till they have seen a redbreast bathe without danger; but the first which ventures is soon followed by the others, which begin to quarrel if the place is not large enough for all the bathers. In order to attract them, it is a good plan to have a tame bird running and fluttering on the banks of the stream.

Attractive Qualities.—The song thrush is the great charm of our woods, which it enlivens by the beauty of its song. The rival of the nightingale, it announces in varied accents the return of spring, and continues its delightful notes during all the summer months, particularly at morning and evening twilight. It is to procure this gratification in his dwelling that the bird-fancier rears it, and deprives it of its liberty; and he thus enjoys the pleasures of the woods in the midst of the city. With care and properly varied food it may be preserved in captivity five or six years.



THE FIELDFARE.

Turdus pilaris, **Linnæus**; La Litorne, ou La Tourdelle, **Buffon**; Die Wachholderdrossel, **Bechstein.**

This bird is in size between the two preceding, its length being ten inches, of which the tail occupies four. The beak is an inch long, blackish at the point, otherwise yellow, as well as the opening of the throat and the tongue. The iris is dark brown. The shanks, an inch and a quarter high, are deep brown; the top of the head and neck, the cheeks, the bottom of the back, and the rump, are ash gray, with some blackish spots at the top of the head; a white line passes above the eyes; the back is rust brown; the throat and half the breast are rusty yellow, strewed with black heart-shaped spots; the rest of the under part of the body is white, with blackish heart-shaped spots on the sides, and longer ones towards the vent and tail.

In the female the upper part of the beak is browner, the head and rump of a paler gray, the throat whitish, the back dingy rust colour, and the feet deep brown.

Of this species there are many varieties, the white, the spotted, the white headed, and the like.

Habitation.—When wild this species spreads not only all over Europe, but also over Syria and Siberia. In the summer it remains in the northern regions, where it builds in pine forests. It arrives in Germany and England in prodigious flights in November, and passes the winter in places producing the juniper; its return northward takes place in the first fine days of spring.

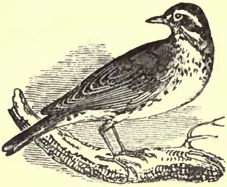
In confinement it is treated like the missel thrush, but it is generally only kept as a decoy bird. Heat being injurious, it is kept as far as possible from the stove.

Food.—When wild it feeds like the two preceding species.

In confinement it is fed in the same way; raw carrots grated with bread is added, which the others like also.

Mode of Taking.—The same as in the two preceding species.

Attractive Qualities.—Its song is a mere harsh disagreeable warble. I should not have introduced it among cage birds if the lovers of bird-catching did not in winter require its call when pursuing its species.



THE REDWING.

Turdus iliacus, Linnæus; Le Mauvis, Buffon; Die Rothdrossel, Bechstein.

This species is smaller than the song thrush, and has much resemblance to the fieldfare. Its length is eight inches, of which the tail occupies three and a quarter. The beak is nearly an inch long, blackish, and yellow only at the base and angles of the lower mandible; the iris is nut-brown. The shanks are an inch high, and light gray; the feet are yellow; the head, the upper part of the neck, the back, the rump, and the small coverts of the wings, are olive brown. The plumage is more brilliant than that of other thrushes, and the orange-hue under the wings, which has procured it the name of the redwing thrush, will always sufficiently distinguish this from those of the same genus.

The female is altogether lighter coloured. The line of the eyes is almost white; the spots on the sides of the neck light yellow; the under part of the body is white, the neck alone appearing yellowish; the spots on the breast are grayish brown, and there are none about the vent. This species also has its varieties, as white, streaked, and the like.

Habitation.—When wild it inhabits the north of Europe; it goes to the south only towards the end of October, and returns at the end of March or beginning of April.

In confinement the redwing is treated like the preceding; but it is not much valued, as its song is in no respect agreeable. It always requires fresh water and but little warmth.

Food, Mode of Taking, Diseases.—The same as in the preceding species.

Attractive Qualities.—The song of the male is as unmelodious as that of the fieldfare. These birds make a great noise when they are collected in large flights upon the alders, in March and April, but their warbling hardly deserves the name of song. I have known but one which succeeded in imitating, though very indifferently, the notes of the song thrush and some loud tones of the nightingale. It is not therefore their song which will gain these birds a place in the house; but they may please by their familiarity, their patience, their easy motions, and the readiness with which they obey orders. Bird-catchers keep them principally as decoy birds. They are good eating.

THE ROSE OUZEL.

Turdus roseus, Linnæus; Le Merle Couleur de Rose, Buffon; Die Rosenfarbigedrossel, Bechstein.

This is a bird which from its beauty certainly merits a place in this work. Its length is nearly eight inches, of which the tail measures three, and the beak one. This latter is black, sometimes lead-coloured, from the base to the middle, and flesh or rose-coloured from the middle to the point; the iris is whitish; the shanks are fourteen lines high, lighter or darker flesh-coloured; the claws are blackish. The head, neck, and throat, are black, with the tips of the feathers white, very much like the starling, and changeable into green, blue, and purple; the feathers at the top of the head are long and narrow, and rise elegantly into a crest; the back, the rump, the shoulders, the breast, the belly, and the sides, are of a brighter or paler rose-colour, according to the age and season.

The female differs from the male only in being less highly and brilliantly coloured.

Habitation.—When wild these birds are to be met with in many parts of Europe and Asia. The inhabitants of Aleppo and the neighbourhood see with pleasure the arrival of large flights of them, in the months of July and August, to extirpate the clouds of locusts which then ravage the country. Great numbers are also seen in spring on the banks of the Don and Irtish, where they build and find abundance of food; also on the shores of the Caspian and the banks of the Wolga. In Europe they appear in Sweden as far as Lapland, in England, in Germany, in Switzerland, and France: rare indeed in all these countries, but least so in Italy.

In confinement this bird is kept in a cage of the same size as the blackbird's.

Food.—When wild this bird appears to subsist entirely on insects.

In confinement it would doubtless thrive very well on the food which is given to the blackbird, which will be mentioned hereafter. It is better, however, to study it a little, and find out what suits it best.

Breeding.—It builds among rocks; but its nest has not yet been discovered in Europe, though some circumstances indicate that it propagates there. In 1784, in the duchy of Altenburg, three young ones were killed, but just out of the nest, and which consequently could not have come from far. This fact should excite the attention and vigilance of zealous observers.

Modes of Taking.—Skilful bird-catchers will soon discover the means of catching the bird: snares and limed twigs, with grasshoppers and other living and moving insects for bait, will probably accomplish this end. It would be hazardous to shoot the birds in the hope of wounding them but slightly, as is sometimes done with other birds, which soon recover, and remain tame, if, during their recovery, they have been well treated.

Observations.—A sportsman discovered, in 1794, in the environs of Meiningen, in Suabia, a flight of eight or ten rose ouzels, moving leisurely from south-west to north-east, and passing from one cherry-tree to another. He fired on these birds, only one fell, which was fortunately very slightly wounded, so that it soon quite recovered. Being immediately carried to M. Von Wachter, the rector of Frickenhausen, this clergyman took the greatest care of it; he gave it a spacious cage, and found that barley-meal moistened with milk was as wholesome as agreeable to it. His kindness tamed it in a short time so far that it would come and take from his hand the insects which he offered to it. It soon sang also, but its warblihg consisted at first of but a few harsh sounds, pretty well connected however, and this became at length more clear and smooth. Connoisseurs in the songs of birds discover in this song a mixture of many others; one of these connoisseurs, who had not discovered the bird, but heard its voice, thought he was listening to a concert of two starlings, two goldfinches, and perhaps a siskin; and when he saw that it was a single bird, he could not conceive how all this music proceeded from the same throat. This bird was still alive in 1802, and the delight of its possessor

THE BLACKBIRD.

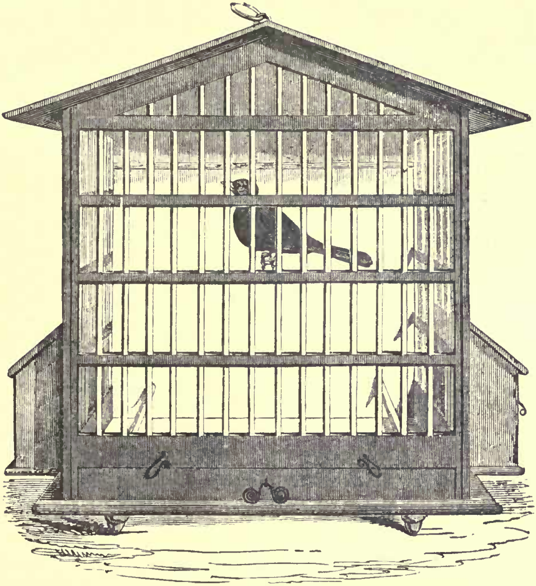
Turdus merula, Linnæus; Le Merle, Buffon; Die Schwarzdrossel, Bechstein.

This species, the most docile of its genus, is nine inches and a half long, four of which belong to the tail. The beak is an inch long, and orange yellow; the iris is dark brown; the shanks are an inch high, and black. The whole plumage is of a pure velvety black; the eyelids alone are orange.

The female is of a brownish black, with the breast of a reddish hue, and the belly grayish; the throat is spotted with dark and light brown. It is also rather larger than the male, which has led some persons who were not well acquainted with it to make another species of it.

The white variety is very well known; there is besides the streaked, the black with a white head, and the pearl gray.

Habitation.—When wild the blackbird is found all over the old world, as well as in Germany; it is the only species of its genus which does not migrate thence



CATO'S BLACKBIRD'S CAGE

In confinement it is kept in a large cage; it is better to keep it separate because, whether from spite or jealousy, it is often inclined, like the tits, to pursue and kill its little companions of the aviary or room.

Food.—When wild the blackbird eats berries, and, in winter, when insects are scarce, he seeks them near warm springs.

In confinement he is satisfied with the first universal paste, but he also eats bread, meat, and anything which comes to table, such as a bit of apple. More delicate than the song thrush, he would not digest mere bran and water. He delights in bathing often, and should therefore be furnished with the means for so doing.

Breeding.—As the blackbird does not travel he pairs early in the spring, and the first young are hatched by the end of March. The nest, placed in a thick bush, or in a heap of boughs, is formed on the outside of stalks, then of moss and mud, and lined in the inside with fine hay, hair, and wool. The female lays three times a year, from four to six eggs, of a greenish gray, spotted and streaked with light brown; when the young are hatched the males are always darker than the females, therefore bird-catchers can never be mistaken when they take the former and leave the latter. They are easily reared on white bread soaked in boiled milk, a little raw beef, and worms dipped in water. It is better to take them from the nest when the quills of the feathers are just beginning to develop, because, having then no idea of their natural song, they will retain more perfectly and distinctly the airs which may be taught them.

Diseases.—An obstruction in the rump gland is their most common disorder, and must be treated in the manner described in the Introduction. It would doubtless be prevented by never omitting to furnish the means of bathing. With care, and a proper variety of food, this bird will live in confinement ten or twelve years.

Method of Catching.—Timid and distrustful, the blackbird seldom enters the area or barn-floor trap, but it is easily caught in the winter with a noose or springe, by using service berries for a bait. It sometimes falls into the large traps set for tits, when the berries are spread over the bottom; limed twigs put with the berries in a place cleared from the snow, will catch many also; it also goes to the water-trap, but generally at night-fall. Its call is "*tsizirr*, *tak*, *tak*."

Attractive Qualities.—The natural song of the blackbird is not destitute of melody; but it is broken by noisy tones, and is agreeable only in the open country. When wild it sings only from March to July; but when caged, during the whole year, except when moulting. Its voice is so strong and clear, that in a city it may be heard from one end of a long street to the other. Its memory is so good, that it retains, without mixing them, several airs at once, and it will even repeat little sentences. It is a great favourite with the lovers of a plaintive, clear, and musical song, and may, in these respects, be preferred to the bullfinch, whose voice is softer, more flute-like, but also more melancholy. The price of these two birds, if well taught, is about the same.

THE RING BLACKBIRD.

Turdus torquatus, Linnæus; Merle à Plastron blanc, Buffon; Die Ringdrossel, Bechstein.

This bird is larger than the common blackbird, being in length ten inches and a half, four of which belong to the tail.

The beak is an inch long, raven gray, yellowish white at the base of the lower mandible, and yellow at the angles as well as inside: the iris is chestnut brown; the shanks dark brown, and fourteen lines high; the upper part of the body is black; and it is the principal colour of the under part also; but the feathers of the belly and the coverts of the wings are edged with white; the quill-feathers, and the outside feathers of the tail are grayish white; a white spot, tinged with red, and the size of the finger, placed transversely on the breast, serves to characterize the species, and gives it its name.

The female is of a brownish black; the transverse band on the breast is narrower, and of a reddish ash-colour, shaded with brown.

Those individuals which combine the brown colour of the female with the pectoral band, large, and of a reddish white, are young males; the others, in which it is scarcely discernible, are young females.

Observations.—Though the ring blackbird traverses the whole of Europe, it builds only in the north*. It arrives in Germany and England on the foggy days of the end of October and beginning of November. It moves always in small flights, stopping generally in spots covered with briers and juniper bushes, where it may be caught with a noose. Its food, when free and in confinement, is the same as that of the common blackbird, with which it has the most striking resemblance in its gait, the motion of its wings and tail, and its call, "*tak*." Its voice, though hoarser and deeper, is nevertheless more harmonious and agreeable. It is so weak that a redbreast may overpower it. It continues singing at all times, except when moulting. It will live in confinement from six to ten years.

THE ROCK THRUSH.

Turdus saxatilis, Linnæus; Le Merle de Roche, Buffon; Die Steindrossel, Bechstein.

This rare and striking bird is unknown in many parts of Germany †. Though its principal characteristics place it in the genus of the blackbird, it has more resemblance to the starling, both in its manners and gait, which are varied and agreeable. Its length is seven inches and a half, two and three quarters of which belong to the tail. The beak, an inch long, and the shanks, an inch and a quarter high, are black. The head and neck are grayish blue, or ash blue, lighter in the old, and darker in the young birds; the top of the back is dark brown, often varying to a lighter brown, the middle a fine white; the rump, of a dark brown, has the feathers tipped with white; the breast is dark orange, the belly the same; but, according to the season, more or less spotted and undulated with white.

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* I have seen the nest in Scotland.—Translator.

† It occurs on the Rhine at Ehrenbreitzen, and I have seen it on the Siebengebirge.—Translator.

The female is dark brown on the upper part of the body, with edges of whitish gray to the feathers; those of the rump are rust-colour, with the same gray edge; the chin is white; the throat brown; the under part of the neck, and the whole under part of the body, of a dirty orange, with waving lines of brown and white; the tail is paler than that of the male, and the feet are dark brown.

Habitation.—When wild it is found in the south of Europe and Germany, in Austria, and the Tyrol. In France, in Bugey, and more to the south; and especially in the Alps and Pyrenees, frequenting rocks or old ruined castles. In its migrations it visits bare rocky mountains, searching for insects which take refuge among the stones. Its departure is in September and its return in March.

In confinement it is furnished with a cage larger than that of the nightingale.

Food.—When wild it appears to live entirely on insects.

In confinement it is fed like the nightingale; but with every care it cannot long be preserved.

Breeding.—The female builds her nest in an almost inaccessible crevice of the rocks, and lays five eggs. As the young are very susceptible of instruction, they are readily brought up when they can be obtained *; they are fed and treated like young nightingales.

Mode of Taking.—It is by fixing to the spots they frequent plenty of limed twigs, with meal-worms attached to them; it is said that in the Alps and Pyrenees they are caught with a bird-call.

Attractive Qualities.—It is considered one of the most agreeable singers; and if caught young it soon acquires the songs of the other birds of the chamber, learns to whistle tunes, and even, like the starling, to repeat words. "It begins to sing," says Buffon, "a little before dawn, which it announces by noisy sounds. If its cage is approached during the night with a candle, it begins to sing; and when, during the day, it does not sing, it appears to be practising in an under tone, and preparing new songs."

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* I purchased two at Coblentz, which lived some time in England. Individuals have been sold in London for seven pounds.—Translator.

THE SOLITARY THRUSH.

Turdus solitarius, LINNÆUS ; Le Merle solitaire, BUFFON ; Die Einsame Drossel, BECHSTEIN.

THIS bird is eight inches and a half long, three of which belong to the tail. The beak is an inch and a quarter long, rather crooked at the point, dark brown without, and yellowish within; the iris is orange. The feet are thirteen lines high, and brown. The whole plumage is brown studded with little white spots, with a faint tint of blue on the sides of the head, the throat, under the body, on the breast and coverts of the wings; the rump is brown without spots, and the tail blackish.

The female differs from the male in having the little spots of a dirty yellow, and more numerous on the breast than elsewhere, and in being destitute of the blue tint; and finally, in having the pen-feathers and the tail-feathers simply brown.

HABITATION.—When wild it seldom quits the mountains in the south of Europe ; in spring, however, it advances as far as Burgundy, and returns in the end of August; it arrives, in the month of April, at the spot where it generally passes the summer, and returns constantly every year to the place where it first took up its abode. Two pairs are seldom found in the same district. Except in the pairing season it is a solitary bird.

In confinement it is furnished with a cage like that of the blackbird.

FOOD.—When wild it feeds on insects, berries, and grapes.

In confinement it is treated like the song thrush, adding ants' eggs and meal-worms.

BREEDING.—The nest, made of blades of grass and feathers, is generally placed at the top of a solitary chimney, or on the summit of an old castle, or on the top of a large tree, generally near a steeple or high tower. The female lays five or six eggs. The young ones, if taken from the nest soon enough, are capable of instruction; the flexibility of the throat fitting it either for tunes or words. They sing also by candle-light in the night. If treated with care they live in confinement eight or ten years. From the summit of a high tower or steeple the male utters for whole days the most beautiful and pathetic song, accompanying it by flapping his wings, moving his tail, and elevating the feathers of his head.

ATTRACTIVE QUALITIES.—His beautiful voice is in great repute in all the countries he inhabits; it is, indeed, very sweet and flute-like; his song, though musical, is somewhat melancholy, as is usual with solitary birds: many persons, however, are very fond of it. This bird, when tamed, fetches a very high price at Milan, Constantinople, &c. In some countries it is so much respected that it is considered sacrilegious to kill it or destroy its nest.

THE BLUE THRUSH.

Turdus cyaneus, Linnæus; Le Merle bleu, Buffon; Die olau Drossel. Bechstein.

This bird is rather larger than the common blackbird, its length being eight inches, three of which belong to the tail. The beak, fourteen lines in length, is blackish, the iris dark nut brown, the eyelids yellow; the shanks, thirteen lines in height, are blackish; the whole plumage is of an ash blue, but each feather has near its tip a transverse brown line, and the tip itself is whitish. The individual birds vary in the depth of the blue, according to their age and sex.

The female is generally more uniform in colour than the male.

Habitation.—When wild the blue thrush is found in the Archipelago, in Dalmatia, Italy, Spain, and other southern countries, always among steep rocks.

In confinement it is provided with a convenient cage, like the preceding.

Food.—When wild it feeds on all sorts of insects.

In confinement it is fed like the nightingale.

Breeding.—Like the rock thrush it builds among rocks, on ruined or deserted towers, and the like. The young are reared in the same way as those of the nightingale.

Attractive Qualities.—Its pretty plumage and fine voice do not constitute its only attractions. It is very easily tamed, and is very capable of instruction, and amuses much by its natural gait and habits, which very much resemble those of the rock thrush.

THE REED THRUSH.

Turdus arundinaceus, Linnæus; La Rousserole, Buffon; Die Rohrdrossel. Bechstein.

This bird has so much resemblance to the whitethroats, as to cause a hesitation whether it should be ranged with them or with the thrush; but the form of the beak and feet, and generally the whole colour of the body, are in favour of the latter. The total length is at most eight inches, four and a quarter of which belong to the tail, which is of a rounded wedge-shape. The beak is ten lines in length, and strong, flattish, brown at the point, yellowish at the base, and orange on the inside; the iris is dark maroon. The shanks are an inch high, strong, and brownish gray, blending into flesh-colour. This bird is so like the nightingale, that if the tail were reddish it would be mistaken for it. The top of the head and neck are dark gray, with a light olive tint; a line of dusky yellow extends above the eyes from the nostrils to the middle; the cheeks are brownish gray; the back and the coverts of the wings reddish gray, which becomes lighter, and passes at the rump into pure rust-colour.

The female differs from the male only in being smaller, rather darker on the upper, and lighter on the lower parts of the body; the white of the throat is less extensive, and the upper part of the head is tinged with red.

HABITATION.—When wild it is found all over Europe, with the exception of the most northern parts; it is a stranger in those parts of Germany only where there are neither lakes, ponds, nor stagnant rivers abounding with rushes; for it is always on their banks and in large swamps that it resides, and more frequently on the ground than in trees *.

In confinement it is provided with a nightingale's cage.

FOOD.—When wild it feeds on aquatic insects, the enormous multitude of which it seems intended to diminish. In order to catch these it is continually seen climbing the stems of the rushes and reeds: it also eats berries.

In confinement, hitherto, no food but that of the nightingale has succeeded with it, and that even for only four or six months. It is soon attacked by a disease which carries off great numbers of whitethroats: the feathers falling off without being renewed, the bird declines and dies of atrophy †.

BREEDING.—The nest is found fastened with wool to the stems of the rushes, or the branches of neighbouring bushes. On the outside it is formed of moss and stubble, firmly mixed, and lined on the inside with fine hay and hair. The eggs, five or six in number, are grayish white, spotted with black. The young, before the first moulting, have the appearance of a whitethroat, with some dark spots on the breast. They are taken from the nest and reared, like young nightingales, on ants' eggs; and if they are placed near this winged Orpheus, they learn his song so well and so perfectly that they become as excellent performers as their masters, with the additional advantage of possessing a noise more flute-like and less shrill than that of the nightingale.

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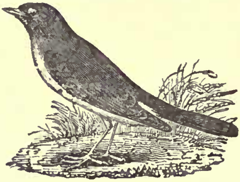
* It is not found in Britain.—TRANSLATOR.

† The food of the caged nightingale is probably not sufficiently nutritious for the reed thrush; no doubt, also, it injures the stomach; perhaps the number of meal-worms with which it is supplied should be increased; and small beetles should be offered to it, whose wing-cases and claws, not being digested by the insectivorous bird, serve to purge the stomach; its food, in short, should resemble as much as possible that of its natural condition.—TRANSLATOR.

Mode of Taking.—The great difficulty of catching this bird makes it scarce in our rooms. The only means is to ascertain well the place it frequents, then to scratch up the earth and throw upon it some meal-worms, and cover the place with limed twigs.

Attractive Qualities.—With a more beautiful and musical voice, its song is also more varied than that of the song-thrush, without being so long, so sustained, or so brilliant, as that of the nightingale, with which it most deserves to be compared. Some of its couplets resemble those of the black-cap, but broken, like those of the song-thrush. When caged it may be much improved by imitation of the notes of the nightingale, which the young easily copy. It is particularly in the morning and evening that the reed-thrush utters his beautiful warblings. Not only is his throat then in motion; his wings, his tail, and his whole body, are agitated as if to follow the cadence and the measure.



THE NIGHTINGALE.

Motacilla Luscinia, Linnæus; Le Rossignol, Buffon; Die Nachtigall, Bechstein

This bird, whose plumage is very ordinary, is scarcely five inches long, two and a half of which belong to the tail. But, in confinement, when it is well fed, and especially when it has been bred from the nest, it is commonly larger, reaching sometimes the size of a lark. The straight beak is seven lines in length, thin, with the two mandibles of nearly the same size, and dark brown above, light gray below, flesh-coloured at the base, and yellow within; the iris is brownish grey. The shanks, three quarters of an inch high, are flesh-coloured; the upper part of the body is brownish gray, tinted with rust-red, and in very old birds is reddish ash-coloured.

Among individuals in confinement, some are lighter, others darker. When placed in the windows of a large well-lighted room, which is not exposed to smoke, they are in the upper parts dark gray, or light brownish gray, and the feathers have a reddish edge; below they are white, and grayish on the sides. But those which are shut up in small ill-lighted rooms, subject to smoke, soon lose their colours, the upper part of the body becoming dingy red, the under part grayish white, and the sides brownish gray.

Those accustomed to birds distinguish the female at a glance. Her shanks are not so high: she is not so erect; her head is not so long and pointed, but rounder; her neck is shorter, and more inclined back; her eye is smaller and less lively; and her throat is not so white. Notwithstanding these characteristics, no other than an experienced person could decide the sex unless he had them both before him.

Nightingales so strongly resemble the female redstart, that the latter is often caught and sold for a nightingale, while the nightingale in its turn is killed and eaten for a redstart. To avoid mistakes, we must observe the following particulars:—The female redstart is always smaller, and her plumage darker: her small feet and beak are blackish; the red of her tail is lighter, and the two middle feathers are blackish, or very dark brown; this long slender tail is in continual motion, while the nightingale moves his only at intervals, for example, when he has hopped a few steps, and he generally carries it raised higher than the point of his wings. His step and attitude are prouder, and his actions seem more deliberate. When he walks, it is by measured regular hops. After a certain number he stops, looks at himself, shakes his wings, raises his tail gracefully, spreads it a little, stoops his head several times, raises his tail again, and proceeds. If any object attracts his attention, he bends his head towards it, and generally looks at it with only one eye. It is true that he jumps hastily upon the insects which constitute his food; but he does not seize them so eagerly as other birds; on the contrary, he stops short, and seems to deliberate whether it is prudent to eat them or not. Generally he has a serious circumspect air, but his foresight is not proportioned to it, for he falls readily into all the snares which are laid for him. If he once escapes, however, he is not so easily caught again, and becomes as cunning as any other bird. The same, indeed, may be said of all birds pursued by man. Nightingales are called, in my opinion very unjustly. silly and curious; for a great number of new things may be offered them without exciting the least attention; but scratch or dig the earth, and they approach directly, because instinct or experience tells them that they shall there find insects, which they are very fond of. Many other species of this group do the same thing; for instance, the blackcap and the redbreast, without its having been mentioned. These birds do not, however, deserve so much of our attention as the nightingale.

Habitation.—When wild, nightingales are found throughout Europe, as far as the north of England and the middle of Sweden: in all Asia, as far as the temperate regions of Siberia; and in Africa on the banks of the Nile. They every where choose for their residence places which are shady, cool, but not cold, such as woods, thickets, and even mere hedges in the fields. They do not go beyond the skirts of the forests on high chains of mountains, and never stop on elevations where the air is too keen. Groves, thick brambles, tufted bushes near fields and meadows, are their favourite abodes. They also like gardens planted with untrimmed elm-hedges, which are consequently thick and bushy down to the ground. It is not true that they like watery situations, and if they frequent them it is not for the water, but because they generally produce thick tufted bushes. It must also be owned that their favourite food is more constantly abundant in such places, and if the cold destroys the insects elsewhere, plenty may always be found in them. It is not however the less certain that the water is not the attraction, or all would repair to its vicinity, which experience contradicts. The fact is, that each nightingale generally establishes himself in the place which gave him birth, whether near the water or not, whether in an orchard or on a mountain; and when once he has fixed on a spot, he returns to it every year, unless the place has lost its charm or advantage. If the wood for instance has been cut down, or has lost the thick shade, which was its chief merit, in such circumstances he seeks in the neighbourhood another spot more to his liking. But if, in a considerable circuit where no change has taken place, a nightingale is seen to establish himself in a spot which was unoccupied the preceding year, it may be concluded that it is a young bird which was born in the vicinity. Convenient places are so much valued, that if the possessors die or are caught, new comers seize upon them immediately; so that the bird which we hear to-day, is very possibly not the same which sang yesterday in the same place. Many other causes may also concur in producing this change of inhabitants, which an ear well versed in the language of these birds will always discover.

It may, perhaps, be asked why, in many places which appear so well adapted to attract nightingales, none are found *. I reply that these spots may be concealed by woods or mountains, and not be perceived by the nightingales in their journeys, or they may be quite out of their route, for they have a regular one which they never quit, because, their progress being slow, and subject to interruptions, it is requisite that they should find on their passage every thing necessary for their subsistence, and too cold an atmosphere is painful to them. It may also happen that the nightingales which formerly frequented them, may have been altogether extirpated; and as it has been said that the young always establish themselves in the district which gave them birth, it is by no means surprising that they should not be chosen, at least there are many chances against it. Rather than wait in vain for this chance, there is a means of re-peopling such places with these charming birds. It is only necessary to bring up some broods of young ones, and not let them loose in the following spring till after the period of return is elapsed; because being no longer excited by the instinct which induces them to travel, and the instinct itself being subdued in a great measure by their imprisoned education, they will not wander, but will remain and propagate, provided they are not disturbed, and will return the year following with all their family. I must not omit to say that the young intended for this re-peopling must not be confined in a cage, as they would lose the use of their wings, and run the risk of perishing the first day of their liberation. As soon as they can feed themselves, they must be allowed an entire room, in which they may fly freely, and grow strong and bold. A sort of grove should be formed of branches or small trees, and nature should be imitated as much as possible also in feeding them, by throwing to them more insects and ants' eggs than usual, to accustom them to seek for them.

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* There are some countries which appear not adapted for nightingales, and in which they never stop, as in France, in Le Bugey, as high as Nantua, a part of Holland, North Wales, the north of England, excepting the county of York, and all Scotland and Ireland.

The period of the nightingale's return throughout the greater part of Germany, is the middle of April, rarely either earlier or later *: it is always when the white-thorn begins to expand its leaves. Advancing slowly and gradually, these birds are not so likely to suffer from bad weather as those which go straight to their destination by one stage. In the middle of August each family prepares to depart; this is done quietly, removing gradually, and passing from grove to grove to the end of their journey; then it is that these birds are caught with nooses or springes, by using elderberries or currants for a bait. The middle of September is the latest period at which they are seen in Germany. All then disappear imperceptibly, so that the time they employ in the rest of their journey is altogether unknown. Other birds, whose instinct leads them to travel in large flights, do not so easily escape observation. If by accident a nightingale is met with at the end of September, or in October, it must have been delayed by some peculiar circumstance; for instance, it may be a young one that has lost its way, or that was hatched late, or it may be an invalid.

In confinement nightingales may be allowed to fly freely, as I have often permitted them; but they do not then sing so well as when in a cage, where they are less subject to interruptions, and where also they live longer and more healthily, from being fed with more care and regularity. The nightingale's cage, of whatever form, must not be less than a foot and a half in length, by about one in width, and one or more in height. The top should be made of linen or soft stuff, that when

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* In Italy they arrive in March, and depart in the beginning of November. In England they arrive in April and May, and depart in the month of September

jumping and struggling, especially when first caught, he may not injure his head. The drinking-cup and feeding-trough are fastened on the outside, unless it is preferred to introduce the latter within, in the form of a drawer. The following are the best form and proportions for a nightingale's cage, that I am acquainted with:—Length, one foot and a half; breadth, eight inches; height, fifteen inches in the middle; thirteen at the sides, because the roof is arched. The sides are made of osiers about a quarter of an inch thick; the bottom is made of the same material, but it is covered by a drawer an inch and a quarter in depth. In order to clean it more easily, I cover it with coarse paper, which I renew every time. The feeding-trough is introduced on one side, with edges high enough to prevent the bird's spilling too much of the food. In the middle of the front of the cage, and extending from top to bottom, is a cylindrical projection in the form of a belfry, in which is suspended a large drinking-glass. The upper stick of the cage is confined here, terminating in a fork, or fixed to a semi-circle, that the projection may not be prevented from moving. This projection is made of osiers, like the rest of the cage. The middle and lower sticks are covered with green cloth, firmly sewed on, that the nightingale may have a softer perch, and not have his feet so soon injured, which is very common with imprisoned birds. The arched roof is also covered with green stuff, which is painted that colour with oil paint, as well as the whole of the cage. But it must be well dried, and quite free from smell before the bird is put into it.

My reasons for preferring this cage are, first, because being small, it occupies less room, without disadvantage to the bird or to the apartment; second, because the size of the osiers leave small intervals for the admission of light, and it is consequently darker; third, because the bird can bathe without wetting his cage or his perches: and consequently his feet remain cleaner and more healthy.

As to the situation of the cage, the prisoner's taste must be consulted. Some nightingales dislike being in the window, and prefer a dark corner of the room; others like the light and the sun. If it is wished that a nightingale should sing everywhere, it is necessary, when he is moulting, and before he resumes his song, to accustom him to a change of place, by carrying him sometimes here, sometimes there. Some will sing only when they are alone, while others like to perform alternately with a neighbour; but they never sing so loud and well when there are several in a room. Perhaps jealousy is the chief cause of this. On these occasions, the first that begins generally maintains the superiority; the others sing only when he stops, and this but seldom, and in an under tone. Some are so sulky that they will not sing at all. Some of these obstinate pouters are occasionally, from their silence, mistaken for females, and consequently dismissed from the room, but when they find themselves alone they begin to sing at full stretch.

Food.—When wild nightingales feed on insects, especially little green caterpillars, of which they clear the bushes and trees, small butterflies, flies, and beetles, and the grubs of insects hid among moss or in the earth, which are discovered by turning it up. At their departure, towards the end of summer, they also eat elderberries and currants

In confinement, meal worms and fresh ants' eggs are the first things which should be offered to birds which are just caught; in place of these, when it is not possible to procure them, some persons prepare a mixture of hard eggs, ox heart, and white bread, some mouthfuls of which they force the birds to swallow, and then throw some meal worms on the rest, to induce the nightingale to eat it; but this artificial food is so unfit for these birds, especially at first, that it kills the greater number. They may also be injured by forcibly opening their delicate beak. When ants' eggs cannot be procured, it is better to set the birds at liberty than thus to sacrifice them. Their best food in summer is ants' eggs, to which are daily added two or three meal worms *; when none of the former remain fresh they must be supplied by dried or rather roasted ox heart and raw carrot, both grated, and then mixed with dried ants' eggs †. The carrot, which may be preserved fresh in sand in the cellar, prevents heat in the stomach and bowels; a little lean beaf or mutton minced small may also be used sometimes; after different trials, it is in this way I feed my nightingales. The cheapest food is very ripe elderberries, dried and mixed with ants' eggs, in the same way as the carrots and white bread.

Some bird-fanciers, in winter, bake a little loaf made of the flour of peas and eggs, which they grate, moisten, and then mix with dried ants' eggs; others, who would still be more economical, pound poppy-seeds in a mortar to express the oil, and then mix them with the crumb of white bread; when accustomed to it the birds seem very fond of it, but a proof that it does not agree with them is that they soon fall into a decline and die. This plan has lately been introduced into Thuringia; but knowing, as I do from experience, that the stomach of the nightingale is not formed to digest such food, since he is not graminivorous, I take care never to administer it; and I think I ought to warn others against it. The best will always be the simplest, and that which is most conformable to nature. Those who adopt that which I have mentioned will have the satisfaction of finding their nightingales healthy, cheerful, active, and good singers.

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* The means of always having a plentiful supply of meal worms is to fill a large earthenware or brown stone jar with wheat bran, barley or oatmeal, and put into it some pieces of sugar paper or old shoe leather. Into each of these jars, of about two quarts in size, half a pint of meal worms is thrown (these may be bought at any baker's or miller's), and by leaving them quiet for three months, covered with a bit of woollen cloth soaked in beer, or merely in water, they will change into beetles (*Tenebrio Molitor*, Linnæus). These insects soon propagate by eggs, which renew and increase the number of maggots so much that one such jar will maintain a nightingale.—AUTHOR.

† Many persons who are not in a situation to buy ants' eggs (improperly so called, since they are the pupæ in their cocoons), will doubtless be glad to know the method used for getting them out of the ant-hill. A fine sunny day in summer is chosen, and, provided with a shovel we begin by gently uncovering a nest of the large wood ants (*Formica rufa*, Linnæus), till we arrive at the eggs; these are then taken away, and placed in the sun, in the middle of a cloth whose corners are turned up over little branches well covered with leaves. The ants, in order to protect the eggs from the heat of the sun, quickly remove them under the shelter which is prepared for them. In this manner they are easily obtained freed from dirt, and from the ants also. In the absence of a cloth a smooth place is chosen, around which some small furrows are cut, over which the branches are laid, which leads to the same result.—AUTHOR.

I have already said that I have tried letting them run about the room, feeding them upon the common universal paste; but this food is not sufficiently nutritious for them: on this diet they can hardly pass six months without falling into a decline, and they would inevitably perish if they were not speedily restored to one which is fitter for them. They require fresh water every day, as well for bathing as drinking; they habitually bathe, when caged, after singing. They have also been observed to do so the first thing in the evening, when the candles were lighted.

Breeding.—Each nightingale has his little district; and if in the pairing season several males are found together, very angry battles take place, which end in the flight of the weakest. The commonest quarrels of this kind are between fathers and sons. The latter, having been born in the place, determine to fix themselves in it; all feeling of relationship is then extinguished, and they are strangers; the relations of father and son, those sweet ties, hitherto so close, are suddenly broken, never more to be felt.

The nest is built in a grove or orchard, among a heap of branches, or on a thorn bush, or the trunk of a tree surrounded by briars; or even on the ground when it may be hid by tall grass or thick bushes. Its form is simple and inartificial, on the outside dry leaves, on the inside hay, fine roots, with the hair of animals, is all the apparatus. The female lays from four to six eggs, of a brownish green, on which she sits a fortnight. The young are fed with small caterpillars and butterflies. As the low position of the nest exposes them to become the prey of carnivorous quadrupeds, they soon quit it, even before they can fly. Their plumage before moulting has no resemblance to that of the old birds except the red of the tail; the upper part of the body is of a reddish grey, spotted with yellowish white on the head and coverts of the wings; the under part is of a rusty yellow, spotted on the breast with dark brown; but after moulting the resemblance is so perfect that they can hardly be distinguished. If, therefore, any of these birds are caught towards the end of summer, they are carefully examined on the back of the head, round the eyes, and under the beak and neck, for, provided there remains in these places a small feather, or mere yellow point, it is sufficient to ascertain that they are young. As these are the only means of judging, if no marks appear, it is necessary to wait for a few days till the bird begins to sing. This, however, is not a sure sign, as the young females sing as well as the males, till the month of April, though in a weaker and more unconnected way, and without so visibly swelling their throats: it is by these nice observations that connoisseurs succeed in distinguishing them. It may also be remarked, as a help to those who wish to rear nightingales, that, when in the nest, those which are marked with white, and especially those which have a white throat, are males; the reddest and brownest being always females. The young, when taken, are fed with ants' eggs mixed with white bread, grated and moistened. The males begin to warble even before their tails are quite grown: if the father and mother are taken at the same time as the young ones, they will, when caged, continue to feed them as before. It is said that nightingales sometimes build in the bird room; this, however, can only succeed by giving up to a tame healthy pair a whole room, in which a sort of grove should be formed of branches.

Diseases.—In general moulting amounts to a disease among nightingales: at this critical time they require a more succulent diet, and sometimes a spider by way of purgative. If their stomach is disordered they puff up their feathers, half shut their eyes, and remain for hours with their head under their wing. They are relieved and cured by ants' eggs, some spiders, and by giving them occasionally water impregnated with saffron till it is of an orange colour, to drink.

As to those diseases which they have in common with other birds, they are treated according to the directions given in the Introduction. It is especially necessary, every three months, carefully to remove the large scales from their legs and toes. A nightingale may be kept in confinement fifteen years; whilst in a wild state they are never observed to exist so long in the same spot, which seems to prove that they do not attain so great an age when exposed to all sorts of accidents, both from birds of prey and bird-catchers. I have an instance of a nightingale which has lived twenty-five years in confinement. When they have reached six years they begin to sing less frequently and long, with less brilliancy and ornament; it is then better to set them at liberty in the month of May. The open air often invigorates them so much that they regain their song in all its force and beauty.

Mode of Taking.—Nothing is easier than to catch a nightingale in the season of pairing. If a little furrow, smooth at the bottom, is dug in a dark soil, and some meal worms or ants' eggs are thrown into it, he will immediately fly to these delicacies. By putting also in the same place limed twigs, or a small net which may be easily dropped, he will soon be caught; it is even sufficient to fix over the furrow a bit of wood supported by a stick, which will fall as soon as the bird perches upon it. He is so unsuspicious that he observes the snare being laid, and then foolishly falls into it, when the bird-catcher has moved only a few steps from it; he will even allow himself to be led to it when at a little distance, if in a gentle manner. A birdcatcher may thus, in a few hours, depopulate a whole district of these delightful songsters. If, however, this is feared, there is a means of baffling his intentions, by anticipating him, and catching the nightingale we wish to preserve in our neighbourhood, either by a limed twig or in a net, and letting him go again. This experiment will prevent his falling so readily into the snare in future. In the greater part of Germany, indeed, it is forbidden, under a very heavy penalty, to catch nightingales. Another mode of taking them is by nooses and springes, and suspending for a bait, instead of berries, live meal-worms; but there is one disadvantage attending it, while struggling the bird almost always injures his feet, especially in springes.

Attractive Qualities.—The first good quality of a nightingale is undoubtedly its fine voice, and notes which I shall endeavour to describe. The nightingale expresses his different emotions by suitable and particular tones. The most unmeaning cry when he is alone appears to be a simple whistle *fitt*, but if the syllable *crr* is added, it is then the call of the male to the female. The sign of displeasure or fear is *fitt* repeated rapidly and loudly before adding the terminating *crr;* whilst that of satisfaction and pleasure such, for example, as conjugal endearments, or on the occasion of finding a delicate morsel, is a deep *tack*, which may be imitated by smacking the tongue.

In anger, jealousy, rivalry, or any extraordinary event, he utters hoarse disagreeable sounds, somewhat like a jay or a cat. Lastly, in the season of pairing, when the male and female entice and pursue each other, from the top of a tree to its base, and thence again to the top, a gentle subdued warbling is all that is heard.

Nature has granted these tones to both sexes; but the male is particularly endowed with so very striking a musical talent, that in this respect he surpasses all birds, and has acquired the name of the king of songsters. The strength of his vocal organ is indeed wonderful; and it has been found that the muscles of his larynx are much more powerful than those of any other bird. But it is less the strength than the compass, flexibility, prodigious variety, and harmony of his voice which make it so admired by all lovers of the beautiful. Sometimes dwelling for minutes on a strain composed of only two or three melancholy tones, he begins in an under voice, and swelling it gradually by the most superb crescendo to the highest point of strength, he ends it by a dying cadence; or it consists of a rapid succession of more brilliant sounds, terminated, like many other strains of his song, by some detached ascending notes. Twenty-four different strains or couplets may be reckoned in the song of a fine nightingale, without including its delicate little variations; for among these, as among other musicians, there are some great performers and many middling ones. This song is so articulate, so speaking, that it may be very well written. The following is a trial which I have made on that of a nightingale in my neighbourhood, which passes for a very capital singer[*]:—

Tioû, tioû, tioû, tioû.
Spe, tiou, squa.
Tiô, tiô, tiô, tiô, tio, tio, tio, tix.
Coutio, coutio, coutio, coutio.
Squô, squô, squô, squô.
Tzu, tzu, tzu, tzu, tzu, tzu, tzu, tzu, tzu, tzi.
Corror, tiou, squa, pipiqui.
Zozozozozozozozozozozozo, zirrhading !
Tsissisi, tsississisisisisisis.
Dzorre, dzorre, dzorre, dzorre, hi.
Tzatu, tzatu, tzatu, tzatu, tzatu, tzatu, tzatu, dzi
Dlo, dlo, dlo, dlo, dlo, dlo, dlo, dlo, dlo.
Quio, tr rrrrrrrr itz.
Lu, lu, lu, lu, ly, ly, ly, ly, lié. lié, lié, liê[†].
Quio, didl li lulylie.
Hagurr, gurr quipio !

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[*] English bird-catchers also express the phrases of the nightingale by words, or particular names, *sweet, jug, sweet, pipe rattle, swetswat, swaty, water bubble, skeg, skeg, whitlow, whitlow*, and the like.

[†] I possess a nightingale which repeats these drawling melancholy notes often thirty or even fifty times. Many pronounce *gu, guy, gui*, and others *qu, quy, qui*. —AUTHOR.

Coui, coui, coui, coui, qui, qui, qui, qui, gai, gui, gui, gui [*]
Goll goll goll goll guia hadadoi.
Couigui, horr, ha diadia dill si!
Hezezezezezezezezezezezezezezezezeze couar ho dze hoi.
Quia, quia, quia, quia, quia, quia, quia, quia, ti.
Ki, ki, ki, ïo, ïo, ïo, ioioioio ki.
Lu ly li le lai la leu lo, didl ïo quia.
Kigaigaigaigaigaigai guiagaigaigai couior dzio dzio pi. [†].

If we could understand the sense of these words, we should doubtless discover the expression of the sensations of this delightful songster. It is true that the nightingales of all countries, the south as well as the north, appear to sing in the same manner; there is, however, as has been already observed, so great a difference in the degree of perfection, that we cannot help acknowledging that one has a great superiority over another. On points of beauty, however, where the senses are the judges, each has his peculiar taste. If one nightingale has the talent of dwelling ageeably on his notes, another utters his with peculiar brilliancy, a third lengthens out his strain in a particular manner, and a fourth excels in the silveriness of his voice. All four may excel in their style, and each will find his admirer; and, truly, it is very difficult to decide which merits the palm of victory. There are, however, individuals so very superior as to unite all the beauties of power and melody; these are generally birds of the first breed, which, having been hatched with the necessary powers, in a district well peopled with nightingales, appropriate what is most striking in the song of each, whence results this perfect compound, so worthy of our admiration. As the return of the males in spring always precedes that of the females by seven or eight days. they are constantly heard to sing before and after midnight, in order to attract their companions on their journey during the fine nights. If their wishes are accomplished they then keep silence during the night, and salute the dawn with their first accents, which are continued through the day. Some persist in their first season in singing before and after midnight, whence they have obtained the name of nocturnal nightingales; but they cannot be distinguished till after some time, when they are established in their district, and have the society of their females. After repeated experiments for many successive years, I think I am authorised in affirming that the nocturnal and diurnal nightingales form distinct varieties, which propagate regularly: for if a young bird is taken from the nest of a night singer, he, in his turn, will sing at the same hours as his father, not the first year, but certainly in the following [‡]; while, on the other hand, the young of a day nightingale will never sing in the night, even when it is surrounded by nocturnal nightingales. I have also remarked that the night singers prefer mountainous countries, and even mountains themselves, whilst the others prefer plains, valleys, and the neighbourhood of water. I will also venture to affirm that all the night singers found in the plains have strayed from the mountains; thus in my neighbourhood, inclosed in the first chains of the mountains of Thuringia, we hear only night singers, and in the plains of Gotha they know only the day nightingale.

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[*] These syllables are pronounced in a sharper clearer manner than the preceding *lu*, *lu*, &c.

[†] However difficult, or even impossible, it may be to express this song upon an instrument (excepting, however, the jay call, made of tin, on which is placed a piece of birch cut in a cross, and which is held between the tongue and the palate), yet it is very true that the accompaniment of a good piano produces the most agreeable effect.—AUTHOR.

[‡] We must not confound *true nocturnal* nightingales with those which are called *mopers*. A true nocturnal sings from night to morning without stopping, while a

It is a pity that the time for this delightful bird's song should be so short, that is to say, when wild. It endures hardly three months; and during this short interval it is not maintained with equal power. At its first arrival it is the most beautiful, continued, and impassioned; when the young are hatched, it becomes more rare; the attentions which they require occupying considerable time. If from time to time the nightingale's song is heard, it is evident that the fire which animated it is much weakened. After midsummer all is ended, nothing is heard but the warbling of the young, which seem to study their father's song, and try to imitate it. The nightingale sings much longer in confinement: birds which are caught full grown sometimes sing from November to Easter, those which are bred from the nest sing much longer, sometimes as long as seven months; but in order that they may sing well they must be put under the instruction of an old nightingale which is a good singer, otherwise they will be only stammerers, mutilating their natural song, and inserting in a confused manner tones and passages which they have caught from other birds. If, however, they have a good instructor, and a good memory, they imitate perfectly, and often add to their instructor's song some beauties of their own, as is usual among young birds*.

I cannot help here mentioning the cruel and disgusting selfishness of some men, who, in order a little to prolong the song of this interesting bird, sacrifice to their transient gratification its eyes, by blinding it, as is done to the lark and the chaffinch.

It is said that a nightingale and a female red-breast running free in the room will sometimes pair, and produce mules, but I have no experience on this subject.

I cannot better complete my account of the nightingale's song than by transcribing the delightful, though somewhat exaggerated picture, which has been given of it by Buffon. "There is no well organised man," says he,

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moper sings only at intervals, unconnectedly, and always makes pauses of some minutes between each strain. All nightingales become mopers when they reach five or six years of age; whence arises the mistake of many persons, who think they possess a nocturnal when they have really only a moper. The reverse happens sometimes, also; for a true nocturnal bird, caught such, often loses his power after one or two years of captivity, and is then a mere moper.—AUTHOR.

* It must, however, be owned, that of twenty young nightingales bred from the nest, scarcely one succeeds in all respects. They seldom possess their natural song in its purity; they almost invariably introduce, in spite of all their instruction, foreign and disagreeable tones. The young which are caught in the month of August, before their departure, are the best they have already learnt their father's song, and they perfect it the following spring, if they are placed beside a good singer.—AUTHOR

"to whom the name of the nightingale does not recal some one of those fine nights in spring, when the sky being clear, the air calm, all nature silent, and as it were attentive, he has listened with delight to the song of this chorister of the woods. Several singing birds may be named whose voices in some respects may compete with that of the nightingale; the lark, the canary, the greenfinch, the blackcap, the linnet, the goldfinch, the common blackbird, the solitary thrush, the American mocking-bird, are all listened to with pleasure when the nightingale is silent: some have fine tones, others have their voice as clear as it is soft, others have as fine flourishes, but there is not one which the nightingale does not surpass in the complete union of all these different talents, and in the prodigious variety of his songs; so that the song of each of the above-named birds is, when taken in its whole extent, only one couplet of that of the nightingale. The nightingale always charms, and never copies himself servilely; if he repeats any passage it is animated with a new accent, embellished by new ornaments. He succeeds in all styles, he renders all expressions, he seizes all characters, and he also augments their effect by contrast. If this Coryphæus of the spring prepares to sing a hymn to nature, he begins by a timid prelude, by faint uncertain sounds, as if he would try his instrument and interest his audience; then gaining courage he becomes gradually animated, warmed, and he soon displays in their plenitude all the resources of his incomparable organ, brilliant bursts, lively delicate trills, volleys of notes whose distinctness equals their volubility; an internal dull murmur, not itself pleasing to the ear, but very fit to enhance the brilliancy of the agreeable strains, sudden, brilliant, and rapid runs, articulated with strength, and even a tasteful ruggedness, plaintive accents, tender cadences; sounds dwelt on without art, but swelling with sentiment; enchantingly penetrating notes, the true sighs of voluptuousness and love, which seem to come from the heart, and make all hearts palpitate; which produce in all who are not insensible a delightful emotion, a touching languor. In those impassioned tones are recognised the language of sentiment which a happy husband addresses to his beloved partner, and which she alone can inspire; while in other strains, more surprising perhaps, but less expressive, are discovered the simple wish of amusing and pleasing her, or of disputing before her the prize of singing with rivals jealous of his glory and happiness.

"These different strains are interspersed with pauses which in all styles of melody concur in producing great effects. We dwell on the beautiful notes we have just heard, and which still resound in our ears; we enjoy them the more because the pleasure is more limited, more exclusive, and undisturbed by new sensations. Soon we expect, we desire another strain; we hope it may be pleasing; if we are mistaken, the beauty of what we hear will not leave us room to regret that which is only delayed, and the interest of hope is maintained for the strains which will follow. One of the reasons why the song of the nightingale is so striking, and produces so much effect, is, as Mr. Barington has well said, because he sings in the night, which is the most favourable time, and he sings alone, whereby his voice is heard in all its splendour, and is undisturbed by any other voice. He eclipses all other birds, adds Mr. Barington, by his soft flute-like tones, and by the uninterrupted duration of his warble, which lasts sometimes for twenty seconds. The same observer reckoned in this warble sixteen different strains, well marked by their first and last notes, the intermediate notes being tastefully varied by the bird; and he ascertained that the space filled by the nightingale's voice is no less than an English mile in diameter, especially when the air is calm: this equals the compass of the human voice.

"It is surprising that so small a bird, which weighs only half an ounce, should have such force in the vocal organs. Mr. Hunter has observed that the muscles of the larynx, or gullet, are stronger in proportion, in this species, than in any other, and also stronger in the male which sings, than in the female which does not sing.

"Aristotle, and Pliny after him, say, that the song of the nightingale lasts in all its strength for fifteen days and fifteen nights uninterruptedly, at the time that the trees are putting forth their leaves; this can refer only to wild nightingales, and must not be taken literally; for these birds are not silent either before or after the period fixed by Aristotle. It is true they do not continue to sing with so much ardour and constancy. They generally begin in the month of April, and do not completely end till the month of June, about the time of the solstice; but the time when their song diminishes most, is when the young are hatched, because they are then occupied in feeding them, and in tho order of instincts, that which tends to the preservation of the species is pre-eminent. Captive nightingales continue to sing for nine or ten months, and their song is sustained not only for a longer time, but it is more perfect and studied. Hence Mr. Barington infers, that in this species, and in many others, the male does not sing to amuse the female, and enliven her fatigue when sitting; which appears a very just and probable inference. Indeed, the female when she sits performs her office from an instinct, or rather a passion, stronger in her than even the passion of love; she finds in it an internal satisfaction of which we can form no idea, but which she appears to feel sensibly, and we cannot therefore suppose that at such moments she is in any want of consolation. Since then it is neither from duty nor virtue that the female sits, neither is it on that account that the male sings: indeed he does not sing during the second incubation. It is love, and especially the first season of love, which inspires the song of the bird; it is in spring that they experience the want both to love and to sing; it is the males which have most desire, and it is they who sing the most. They continue to sing during the greater part of the year if we preserve around them a perpetual spring, which incessantly renews their ardour, without affording an occasion for extinguishing it; this happens to caged nightingales, and even, as it has been already mentioned, to those which have been taken full grown. Some have been known to begin to sing with all their strength a few hours after being caught. They must, however, have been insensible of their loss of liberty at first. They would starve the first seven or eight days if they were not fed, and would injure their heads against the top of the cage if their wings were not tied; but at last the passion for singing prevails, because it is produced by a still deeper passion.

"The songs of other birds, the sounds of instruments, the tones of a sweet sonorous voice, excite them much. They run, they approach, attracted by the sweet sounds; but duets attract them still more powerfully, which would seem to prove that they are sensible to the effects of harmon

They do not continue silent auditors, they join the performance, and use all their efforts to eclipse their rivals, to surpass all the other voices, and even all other sounds. It is said that they have been known to drop down dead at the feet of a person singing. Another has been seen fluttering, swelling his throat, and uttering an angry warble every time a canary which was near him, began to sing; he succeeded by his threats in imposing silence, so true is it, that superiority is not always free from jealousy. Can it be in consequence of the passion for pre-eminence, that these birds are so careful to seize every advantage, and that they prefer singing in a place favourable to sound, or within reach of an echo?

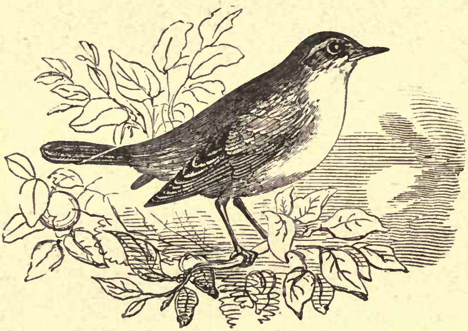
"All nightingales do not sing equally well. Some are so very inferior as not to be worth keeping. It has even been thought that the song of the nightingale is different in different countries. In England, those who are curious respecting these birds, prefer, it is said, those of the county of Surrey, to those of Middlesex; as they prefer the greenfinch of Essex, and the goldfinch of Kent. This diversity of song among birds of the same species has very rationally been compared to the different dialects of the same language. The true causes can hardly be assigned, as they are for the most part accidental. A nightingale may perhaps have heard other singing birds, or emulation may have caused him to perfect his song, which he thus transmits improved to his descendants, for every father is the singing master of his family; and it is easy to perceive that in succeeding generations the song may be still further improved or modified by similar accidents.

"After the month of June, the nightingale sings no more, and he retains only a hoarse cry, a sort of croaking, by which the melodious Philomel cannot be recognised, and it is not surprising that formerly, in Italy, they gave him a different name under these circumstances. He is indeed another bird, a bird altogether different in respect of voice, and even, in a great degree, in respect of the colour of his plumage.

"Among nightingales, as well as other species, some females are found participating in the constitution of the male, his habits, and especially in his musical powers. I have seen, in confinement, one of these female singers. Her warble resembled that of the male, but was neither so strong nor so varied. She preserved it till spring; but then subduing the exercise of her talent to the natural duties of her sex, she became silent, in order to build her nest, and to lay, though she was solitary. It appears that, in warm countries, such as Greece, it is very common to see these female singers, and respecting this species and many others we may draw the same inference from a passage of Aristotle. One would hardly imagine that so varied a song as that of the nightingale is confined within a single octave; this is, however, the result of the attentive observations of a man of taste (M. le docteur Remond). He remarked, indeed, some sharp tones which formed the double octave, and which were emitted like lightning; but this happens rarely, and when the bird by a powerful effort of the gullet raises his voice to the octave.

"The same observer discovered shakes on the third, fourth, and octave, but always from sharp to flat; cadences, generally in the minor, on almost every note; but no arpeggios, no coherent design."

Independent of these talents, the nightingale possesses a quality very to augment the number of his friends; he is capable, after some time, of forming attachments. When once he has made acquaintance with the person who takes care of him, he distinguishes his step before seeing him; he welcomes him by a cry of joy; and, during the moulting season, he is seen making vain efforts to sing, and supplying by the gaiety of his movements, and the expression of his looks, the demonstrations of joy which his throat refuses to utter. When he loses his benefactor, he sometimes pines to death; if he survives it is long before he is accustomed to another *. His attachments are long, because they are not hasty, as is the case with all wild and timid dispositions.



THE GREATER NIGHTINGALE.

Motacilla Luscinia major, LINNÆUS; Le Grand Rossignol, ou La Progné †, BUFFON; Der Sprosser, BECHSTEIN.

NATURALISTS make this bird only a variety, or at most, only a species of the common nightingale; but I find points of difference so numerous and so striking, that I think it right to make it a distinct species. 1. It is larger by an inch and a half in

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* "A nightingale which I had given away," says M. Le Manie, "no longer seeing his mistress, left off eating, and was soon reduced to the last gasp; he could not support himself on his perch! but being restored to his mistress, he revived, ate, drank, perched, and had recovered in twenty-four hours. It is said that some have been known, when set at liberty in the woods, to return to their masters." It is quite certain that they recognise the voice of their masters and mistresses, and approach at their call.

† According to the Greeks, Progné was metamorphosed into a nightingale, and Philomel, her sister, into a swallow. The Latins have changed and confused this story, which the moderns have, in their turn, copied without examination.

length, being six inches and a half, of which the tail, also half an inch longer, occupies two and three-quarters; 2. The head is larger, and the beak is thicker; 3. The colours are different; 4. The song is different. With respect to gait, manner, habits, and the like, it is true there is a resemblance, which exists, however, only in common with the whitethroats, and the blackcap, which have never been considered as varieties of the nightingale.

The upper part of the body is a dusky brownish grey; the throat is white bordered with black; the breast is brown, with darker spots; the belly dirty white; the wings are deep brown, edged with dirty red; the tail and its upper large coverts dirty maroon, deeper than in the common nightingale; the whole plumage, in short, is generally and in all parts deeper and darker.

OBSERVATIONS.—The difference in the song is very remarkable. The greater nightingale has a much stronger, louder, and deeper voice; but it sings more slowly and more unconnectedly; it has not that astonishing variety, those charming protractions,and harmonious conclusions of the common nightingale; it mutilates all the strains; and, on this account, its song has been compared to the missel-thrush, to which, however, it is superior in softness and pureness. The common nightingale is superior in delicacy and variety, but inferior in force and brilliancy. The greater nightingale sings generally in the night, so that it is the real night-singer; while among nightingales this is rather uncommon. Its voice is so loud that it is almost impossible to bear it in a room. It is necessary to keep it always outside the window, either by hanging its cage there, or by opening from it a sort of passage into which it can remove.

Its call is also very different; *hi! glack arrr!* It seems also to pronounce *David*, *Jacob*, and generally begins its song by the latter word. If the song is complete, it consists of the following strains :—

Guia, gu, gu, gu.
Hajai, hajai, dzu, dzu, dzu, dzu.
Gorgué, guéguéguéguéguéh,
Hoa goigoigoi gui.
Dzicka, dzicka, dzicka.
Davitt, davitt, davitt.
Gogock, gogock.
Guedum, guedum, guedum, guedum, gueï!
Gai, goi, goi, goi, guirrrr.
Golka, golka, golka, golk.
Hia, guiaguiaguiaguia.
Glockglockglockglockglockglock.
Gueai, gueaigueai gui!
Goi, guaguaguagua guagui.
Heid, heid, heid, heid hi.

Voi dada! voi dada!
Gai, gai, gai, gai, guirr, guirr.
Hoi, gueguegue gui.
Hoi goi,

This bird is not found in any part of Thuringia. There are some in Silesia, Bohemia, Pomerania, near Wittenberg, Halle, and Dessau; but in Austria, Hungary, and Poland, they are in some districts more abundant than the common nightingale *. They generally settle among the bushes of the hills and plains, and especially near rivers. When caged they are fed like nightingales. They are less delicate, however, and live much longer.

They are chiefly brought from Vienna to Thuringia, whence they have the name of Vienna Nightingales. Some people make a business of fetching them from Hungary, in the beginning of April, where they buy them cheap, in order to sell them very dear, in Saxony and other remote provinces. Those from Hungary are preferred to the Polish. A distinguishing characteristic is, that they first pronounce the *davitt* or *jacob* only once when they call; while the second repeat *davitt* many times in succession.

At Thorn, and all along the Vistula, where the common and the large nightingale equally abound, the latter is called the Polish Nightingale, and the former, the Nightingale of Saxony. The nest of the greater nightingale is built like that of the nightingale; but the eggs are larger, and of an olive brown, with dark shades.

These birds are caught like nightingales; their diseases, also, are similar; but they appear to suffer still more when moulting; they become dull and ill, and often die under it. It is usual to give them at this crisis some spiders, and the grubs which gnaw wood; what, however, after many experiments, appears most salutary, is the Golden Tincture of Halle †, one or two drops of which are poured into the drinking-trough.

THE BLACKCAP.

Sylvia atricapilla, BECHSTEIN; La Fauvette à tête noire, BUFFON; Die schwarzköpfige Grasmücke, BECHSTEIN.

THIS distinguished singer among birds, bears, in Germany, the name of *Monk*, or *Moor*, from the black or brown cap which covers the top of his head. These two colours have led some to divide them into two species, but it is quite certain that they only designate the sex; the black marking the male, and the brown the female. Its length is five inches and five-sixths, two and a half of which belong to the tail. The beak is five lines in length, formed like that of the nightingale, and is of a brownish blue, with the edges of the lower base and the interior of a yellowish white; the iris maroon; the feet ten lines high, are dark ash-colour; all the top of the head is black; the cheeks and upper part of the neck are light ash-colour; the upper part of the body, as well as the coverts of the wings, ash-colour, tending to olive; the under part of the body is light grey, fading to white under the belly and breast; the sides and thighs are the same colour as the back; the under coverts of the tail and wings are speckled gray and white; the pen-feathers and tail-feathers are dark brown, edged with the colour of the back.

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* It is not a native of Britain.—TRANSLATOR.

† To prepare this tincture, take of water four parts, of black oxide of iron one part; boil the oxide with the water, and then pass a current of chlorine gas through the mixture till it will absorb no more; filter the liquor and evaporate over a slow fire to the consistence of an extract; when this is cold, pour upon it of hydrochloric ether three parts; let it macerate without heat for several days; then add of alcoholised hydrochloric acid nine parts; macerate again, filter the liquor, and expose it to the sun.—TRANSLATOR.

The female is rather larger; her cap is reddish brown; the upper part of her body reddish grey, tending to olive; the cheeks and throat are light grey; the breast, the sides, and the thighs, are light grey, varying to light olive; the belly is reddish white.

The silky plumage of this bird is so delicate and frail, that it is rare to see one in confinement, whether hopping freely, or caged, which has not its tail or its wings disfigured.

HABITATION.—When wild, this bird is found throughout Europe, inhabiting woods and orchards, or their vicinity; it particularly loves thick copse-wood. In September it leaves our climate, and returns about the middle of April, to enliven our woods by its brilliant and well supported song.

In confinement, when it is allowed to hop about, it is provided with a branch, or a roost furnished with several sticks, because it walks with difficulty, and prefers perching, on which account a cage is better adapted to it. At the time for departure, these birds, urged by the instinct to travel, are much agitated, especially in the night, by moonlight. The desire to rove is so strong, that they often fall ill and die.

FOOD.—When wild, the blackcap feeds on small caterpillars, butterflies, flies, in short, of all kinds, on insects and their grubs; in time of need, on berries and fruits also *.

In confinement this bird does very well on the universal paste, with which a little bruised hemp seed is mixed, and occasionally meal worms, ants' eggs, or insects. In summer and autumn he is supplied with elderberries, and they are also dried, in order that he may have some in winter, soaked in water, which is found very good for his health. He is a great eater, and when at liberty in the bird room partakes of everything, meat, bread, and even vegetables. As he is generally caught in the autumn he is soon accustomed to artificial food, by having elderberries and meal worms mixed with it for several successive days. He is fond of bathing, and must be always well supplied with fresh water.

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* This is a mistake; it is as fond of berries as of insects.—TRANSLATOR.

Breeding.—This species generally lays but once a year, occasionally twice, and even thrice. His nest, placed near the ground, generally in a hedge or bush of whitethorn, is hemispherical, solid, and well built; the outside of stalks, deserted cocoons, and stubble, the inside of fine soft hay, mixed with hair. It contains from four to six eggs, of a yellowish white mottled with yellow and spotted with brown. The young are fed with small caterpillars, insects, and currants; those which are brought up by hand are fed with white bread and milk. The charming tone of their voice gives to their own song, as well as to that of the nightingale and canary, which they easily learn to imitate, a sweetness and grace which are enchanting. Before moulting there is so little difference between the young males and females that it requires great skill to distinguish them, for the cap of the former is only a slight shade darker of olive brown, and the back a greyish brown, rather more tinted with olive; but on the first moulting the head of the male begins to blacken first behind the beak, while that of the female retains its original colour, except that it becomes more bright and distinct. When it is wished to ascertain the sex of these young birds, the best plan is to pull out a few brown feathers from the head; if it is a male, black ones will come up in their place, and thus there will be no danger of taking females by mistake; these, however, would soon be known, because the males begin to warble as soon as they are able to fly and feed themselves.

Diseases.—The blackcap is subject to the same diseases as the nightingale, but is more frequently attacked by decline. As soon as the symptoms appear he must be fed with a great many meal worms and ants' eggs, and his drinking water must be impregnated with iron, by putting a nail into it. Those which are left to run about the room are apt to lose their feathers. Under such circumstances they must be caged, and exposed to the warmth of the sun or the fire; they must be well fed, especially with the food given to nightingales; these methods generally restore them, and their feathers are gradually renewed. A tepid bath, repeated for two or three days, is very likely to help their development. In epileptic or paralytic attacks I make them swallow, with great success, two or three drops of olive oil; I lately had the pleasure of seeing the success of this remedy on a bird of this species suffering from an apoplectic fit, and which dragged its little paralysed foot about the room where he lived uncaged; he is now quite recovered, very gay, and active; his song was never before so delightful to me. These birds generally live in captivity as long as nightingales.

Modes of Taking.—Every taste but that of the palate must be destroyed if this charming bird is caught for the table. Besides, it is by no means numerous; but if it is desired as an ornament to the house, snares baited with currants must be laid for it in July and August, the greatest care being taken to save the feet, which are very likely to be broken. Patience is very necessary in order to succeed, for it is a very suspicious bird, approaching slowly, and falling into the snare only when pressed by hunger. The same suspicious disposition causes it to repair with repugnance to the water trap, though in other situations it delights in water, and often bathes. If it perceives anything unusual it will remain for hours without approaching, and will pass twenty times by currants which are hung up as a bait without touching them, though very greedy of this food; but if it sees another bird bathe, or drink, it takes courage, and soon falls into the trap. The young, before moulting, still foolish and inexperienced, are more careless, and may be taken in great numbers in autumn; and in the spring they are as easy to catch as the nightingale, by means of a net or limed twigs, in a place cleared from moss and turf, and baited with meal worms and ants' eggs.

ATTRACTIVE QUALITIES.—It is perhaps a sufficient eulogium to say that this bird rivals the nightingale, and many persons even give it the preference. If it has less volume, strength, and expression, it is more pure, easy, and flute-like in its tones, and its song is perhaps more varied, smooth, and delicate. It sings also for a much longer period, both when wild and in confinement, its song being hardly suspended throughout the year by day, and prolonged, like that of the nightingale, far into the night, though begun at dawn. The female sings also, but in a more limited degree, very much like the redbreast, which has caused it to be mistaken for a particular species with a redcap. The call is a sort of smart "*tack*," repeated quickly several times. The sudden view of an unknown object, or of an imminent danger, makes it utter a hoarse disagreeable cry of fear, very like a cat when hurt *.

THE FAUVETTE.

Sylvia hortensis, LATHAM; La Fauvette, BUFFON; Die graue Grasmücke, BECHSTEIN.

THE length of this bird is five inches, two and a half of which belong to the tail. The beak, five lines in length, and formed as in the preceding, is brown below, light lead-colour above, and whitish within; the iris is brownish grey; the feet, nine lines high, are strong, and lead-colour; the upper part of the body is reddish grey, tinted slightly with olive brown; the cheeks are darker, and round the eyes whitish; the under part of the body, including the breast and sides, is light reddish grey; the belly is white as far as the under coverts of the tail, which are tinged with reddish grey; the knees are grey; the pen-feathers and tail-feathers are brownish grey, edged with the colour of the back, and spotted with white at the tips; the under coverts of the wings are reddish yellow.

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* This bird also has the art of pleasing by his pretty tricks. He shows a striking affection for his mistress; utters a particular sound, a more tender note to welcome her; at her approach he darts against the wires of his cage, and, by a continued fluttering, accompanied with little cries, he seems to express his eagerness and gratitude.

A young male which I had put in the hothouse for the winter, was accustomed to receive from my hand, every time I entered, a meal-worm; this took place so regularly, that immediately on my arrival he placed himself near the little jar where I kept the meal-worms. If I pretended not to notice this signal he would take flight, and, passing close under my nose, immediately resume his post; and this he repeated, sometimes even striking me with his wing, till I satisfied his wishes and impatience.

The female differs only in having the under part of the body, as far as the breast, of a lighter colour.

Habitation.—When wild, this bird, which is found all over Europe, appears to prefer the groves and bushes which skirt the forests, as well as orchards in their vicinity. He arrives some days before the nightingale, and departs at the end of September.

In confinement he is treated like the blackcap, and, being more delicate, must be furnished with a cage.

Food.—When wild the fauvette feeds on small caterpillars and the other little insects which are found on the bushes, where he is continually searching for them, uttering at the same time the sweetest and softest song. After midsummer he appears very fond of cherries; he eats the pulp up to the stone, and this causes his beak to be at this season always stained; he also likes red currants and elderberries.

In confinement he is so great an eater that if he is not caged he hardly ever quits the feeding-trough of the nightingale. Though he is more easily tamed than the blackcap, he seldom survives more than two or three years, and the artificial food is no doubt the cause. He appears very fond of the universal paste; but I have often observed that it causes the feathers to fall off to so great a degree that he becomes almost bare, and then I think he dies of cold rather than from any other cause *.

Breeding.—The nest of the fauvette, placed in a hedge or bush of whitethorn, at about three feet above the ground, is well built on the outside with blades of grass and roots, and inside with the finest and softest hay, very seldom with moss. The edges are fastened with spiders' webs and dry cocoons. The female lays four or five eggs, of a yellowish white, spotted all over with light ash grey and olive brown. The young, which are hatched after fifteen days' sitting, are no sooner fledged than they jump out of the nest the moment it is approached.

Diseases.—They are the same as in the blackcap; but the fauvette is

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* No doubt his great voracity weakens his stomach, and by loading the intestines with glutinous matter the vessels cannot take up sufficient nourishment; it is therefore not conveyed sufficiently to the skin and feathers, whence proceed the fall of the latter and the enfeeblement of the body.

still more subject to the loss of its feathers. It fattens so fast upon the first universal paste that it often dies from this cause.

Mode of Taking.—These birds may be caught during the whole of the summer with nooses and springes baited with cherries, red currants, or elderberries. They go also very readily to the water trap, from seven to nine in the morning, and in the evening a little before sunset.

Attractive Qualities.—" Of the inhabitants of our woods," says Buffon, " fauvettes are the most numerous and agreeable. Lively, nimble always in motion, they seem occupied only with play and pleasure ; as their accents express only joy, it is a pretty sight to watch them sporting, pursuing, and enticing each other ; their attacks are gentle, and their combats end with a song "

THE WHITE-BREAST*

Motacilla Fruticeti, Linnæus ; La Petite Fauvette, Buffon ; Die rostgraue Grasmücke, Bechstein.

This bird, which is but little known, resembles in most points the preceding, but its figure is smaller and its plumage darker. Its length is four inches and three quarters, of which two and a half (being more than half of the whole) belong to the tail. The beak, four lines in length, is brown above and yellowish white below and on the edges ; the iris dark brown ; the feet, nine lines in height, are pale lead-colour ; all the upper part of the body, comprising the wing-coverts, is dusky reddish grey, darker towards the head and lighter towards the rump.

I have never been able to discover any difference between the plumage of the male and female.

Observations.—This bird arrives among us towards the end of April. It frequents hilly places covered with bushes and briars, among which it builds its nest, about four of five feet from the ground, and among the thickest foliage. The eggs, five in number, are whitish, mottled with bluish brown, and speckled with dark maroon. Incubation lasts but thirteen days. At first the young are fed with the smallest caterpillars, afterwards with larger ones, flies, and other insects ; but as soon as they can fly they accompany their parents in search of cherries, red currants, elderberries, and, later in the season, the berries of the service tree. The family departs together in the month of September, and then some are taken in nooses or springes baited with elderberries. But this species is not much valued, and does not therefore excite the attention of bird-catchers, who give the preference to the fauvette.

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* This bird is not known in Britain.—Translator.

However, this bird is an excellent singer, and though his voice is not so clear and flute-like as that of the fauvette, yet by skilfully introducing his call into his warble, he produces a very striking and agreeable variety. This species is fed and treated like the preceding, but with still greater care, for it is even more delicate. With all my care I have never been able to preserve it more than two years at the utmost: the difficulty, however, does not appear to proceed from the diet, for being caught in the autumn it soon gets accustomed to the food of the nightingale, by first giving it the berries which it selects in a state of freedom.

THE DUNNOCK, OR HEDGE SPARROW.

Accentor modularis, BECHSTEIN; La Fauvette d'hiver, ou Traine Buisson, BUFFON; Die Braunelle, BECHSTEIN.

THIS species, which in its gait resembles the wren, seems also a link between its own species and that of the lark, for it does not confine itself to insects; it eats all sorts of small seeds, such as those of the poppy and the grasses. Its length is five inches and a quarter, two and a quarter of which belong to the tail. The beak, five lines in length, is very sharp, black, whitish at the tip, and the inside rose-colour; the iris purple; the legs, nine lines in height, are yellowish flesh-colour; the narrow head is, together with the neck, dark ash-colour, marked with very dark brown, like that of the sparrow; the breast a deep slate-colour.

The breast of the female is lighter and bluish grey; she has also more brown spots on her head.

HABITATION.—When wild it is found all over Europe, making its abode in thick deep forests. It is with us a bird of passage; but some individuals, which come from quite the north, remain during the winter near our dwellings, searching the heaps of wood and stones, the hedges and fences, and, like the wren, entering barns and stables. Those which leave us return at the end of March, stop for some time in the hedges, and then penetrate into the woods.

In confinement this bird is so wakeful and gay that it may be safely left at liberty in the room, having a roosting-place for the night; it is also kept in a cage.

FOOD.—When wild, the great variety of things which serve it for food prevent its ever being at a loss throughout the year. It is equally fond of small insects and worms and small seeds. In spring it feeds on flies, caterpillars, grubs, and maggots, which it seeks for in the hedges, bushes, and in the earth. In summer it feeds chiefly on caterpillars; in autumn on seeds of all kinds and elderberries; and in winter, when the snow has covered all seeds, it has recourse to insects hid in the cracks and crevices of walls and trees.

In confinement it will eat anything that comes to table. It is fond of he universal paste, hemp, rape, and poppy-seeds, and refuses none of these hings immediately on being imprisoned, and it soon seems as completely at ease as if accustomed to confinement*.

Breeding.—This species lays generally twice a year; placing its nest among the thickest bushes, about five or six feet from the ground; the outside is composed of mosses, and fibres of roots, and wood, and the inside is lined with the fur of deer, hares, and the like. The eggs, five or six in number, are bright bluish green. The young are no sooner fledged than, like the preceding, they quit the nest. Their plumage is then very different from that of their parents: the breast is spotted with grey and yellow, the back with brown and black; lastly, the nostrils and angles of the beak are rose-coloured. They are easily reared on white bread and poppy-seeds moistened with milk. As soon as they are tamed these birds have a great inclination to build in the room. The male and female collect all the little straws, threads, and similar materials which they can find, to build a nest among the boughs with which they are supplied for the purpose. The female lays even when solitary; they may be paired with red-breasts, and these unions succeed very well.

Diseases.—If it were generally true, that birds in a wild state are never ill, this species must be excepted; for, however strange it may appear, the young are subject to the small pox; they are attacked by it while in the nest, or even after they can fly. I have a young bird of this kind, which, at a time when this disease prevailed in my neighbourhood, took it; he recovered, however, tolerably well, but he entirely lost the tail-feathers, which were never afterwards renewed. Old ones are sometimes caught or killed whose feet and eyes are ulcerated, or have tumours on them; perhaps they may be only chilblains. Weavers' stoves appear to be particularly injurious to these birds; in two or three months their eyes swell, and the feathers fall off all round them; the beak is attacked with scurvy, which spreads to the feet, then all over the body; but they nevertheless continue to live from eight to ten years in these rooms.

Mode of Taking.—This is very easy at their return in the spring. As soon as they appear in the hedges, where they soon discover themselves by the cry "*issri*," a little place near, where the earth is bare, must be found; after having placed limed twigs, and thrown among them earth or meal worms for a bait, the dunnock is gently driven towards them without alarming him; as soon as he perceives the worms he darts upon them and falls into the snare. In the autumn they may be caught in the area and with a noose; in winter in the white-throat's trap; but they resort in the greatest numbers to the water trap, not so much for the sake of bathing as to seek for dead insects or decayed roots.

Attractive Qualities.—However agreeable this bird may be in the room, from its good humour, agility, gaiety, and song, it does not deserve the name of winter nightingale, which it bears in some places; its song is too simple and short; it is a little couplet, composed of a strain of the lark and one of the wren. The sounds *tchondi*, ***hondi***, ***hondi*** are repeated frequently and for a long time, always descending a sixth, and gradually diminishing in power. This song is accompanied with an uninterrupted movement of the wings and tail, and lasts through the year, except at the moulting season. Some young ones, reared in confinement, will, if placed beside a fine singing bird, learn enough of its song to embellish their own. But, whatever may be asserted on the subject, they never succeed in imitating the nightingale. When the dunnock disputes with its fellow captives for a place or for food its anger evaporates in a song, like the crested lark and the wagtail.

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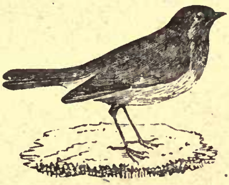
* It is however, by no means easily tamed, but remains fearful and distant.—Translator.



THE RED-BREAST.

Motacilla rubecula, Linnæus; Le Rouge-gorge, Buffon; Das Rothkelchen, Bechstein.

The red-breast is almost universally known in Europe. It is five inches and three quarters long, two and a quarter of which belong to the tail. The beak is five lines in length, and horn brown, with the lower base and the inside yellow; the iris is deep brown; the shanks, eleven lines in height, are of the same colour; the forehead, cheeks, and under part of the body, from the beak to the bottom of the breast, are orange red; the upper part of the body and the wing-coverts dingy olive; the first wing-coverts have at their tip a little triangular spot.

The female, which is rather smaller, is not so orange-coloured on the forehead, and this colour is not so bright upon the breast; the shanks are a purplish brown; yellow spots are almost always absent from the wing-coverts; the old females alone having very small yellow marks.

The males of the first year, which are caught in the spring, very much resemble the females: they have but very small yellow spots, and sometimes none; the breast is saffron yellow; but the feet are the distinguishing mark, being always very dark brown.

This species has varieties, as the white red-breast and the variegated red-breast. In confinement, by sometimes removing successively the quill-feathers and tail-feathers out of the moulting season, they will at last be replaced by white ones. These birds are very pretty; I have had several in this way, but I have observed that these last feathers are so weak and delicate that they are easily injured and broken. This repeated operation must give pain to the little creatures, on which account it should be avoided.

HABITATION.—When wild, these birds are found in abundance during the period of migration, on hedges and bushes, but in summer they must be sought in the woods. "This retreat," it has been said, "is necessary to their happiness: the male is engrossed with the society of his mate, all other company is troublesome; he pursues eagerly the birds of his species, and drives them from the district he has chosen for himself; the same bush never contains two pairs of these birds." The red-breasts return to us (in Germany) about the middle of March*; they stop for about a fortnight in the hedges, and then proceed into the woods. In October they return towards the bushes, which they busily search as they travel, and proceed gradually to their destination. Some delay their departure till November, some will even remain here and there throughout the winter, but generally to their cost, as their life is usually sacrificed by these delays. Necessity then forces them to draw near to houses, dunghills, and stables, where they are generally caught by men or cats, or die of hunger and cold if the frost is long and severe, and the snow deep. Care must be taken in hard weather not to transport them suddenly into a warm room, the rapid change from cold to heat invariably kills them. They should at first be put in a cold room, and be gradually accustomed to warm air; with these precautions they will do as well as those which are caught in the autumn or spring.

In confinement the inhabitants of my neighbourhood like to see red-breasts hopping about the room, and they make a roost for them of oak or elm branches. They find that this bird destroys flies and even bugs. Such a situation appears to agree with him very well, as he lives in this way from ten to twelve years. He is so jealous and unsociable that he must not have a companion; he must be quite alone; a second would cause battles which would end only with the death of one of the combatants; if, however, they are equal in strength, and in a large room, they will divide it, and each taking possession of his half, they remain in peace, unless one should pass his limits, in which case war begins, and is maintained to the last extremity.

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* In Britain they remain all the year.—TRANSLATOR.

In order the better to enjoy their pretty song, they are provided with a cage generally resembling that of the nightingale.

FOOD.—When wild the red-breast feeds on all sorts of insects, which are pursued with great skill and agility; sometimes this bird is seen fluttering like a butterfly round a leaf on which is a fly, or if he sees an earth-worm he hops forward flapping his wings, and seizes it. In autumn he eats different sorts of berries.

In confinement, by giving him at first some earth or meal worms, and in the autumn elderberries, he soon gets accustomed to eat anything: he picks up crumbs of bread, the little fibres of meat, and the like, but cheese appears his favourite food. When hopping about the bird-room he likes the universal paste very much *. He chiefly requires a regular supply of fresh water, both for drinking and bathing; and he makes himself so wet as to conceal the colours of his plumage.

BREEDING.—The red-breast lays twice a year. The nest, placed near the ground, either among moss, in the crevices of stones, among the roots of a tree, or in the hole of an old felled trunk, is carelessly formed of moss, lined with fine hay, hair, and feathers. She lays from four to six eggs, of a yellowish white, with lines and spots joined and mixed together of a reddish colour; the colours become deeper as the spots approach the large end, where they form a crown of a light brown colour. The young birds are at first covered with yellow down, like chickens, they then become grey, and their feathers are edged with dusky yellow; they do not acquire the orange red till they have moulted. They are easily reared on white bread soaked in boiled milk. When their cage is placed beside a nightingale they acquire some parts of his song, which, introduced into their own, make a very pretty mixture.

DISEASES.—Their most common disorder is diarrhœa, for which some spiders are administered. Decline is often cured with plenty of ants' eggs and meal-worms; but indigestion often proves fatal, especially when it arises from having eaten too many earth-worms. It may, however, be cured by making the bird swallow spiders and meal-worms.

MODE OF TAKING.—In spring, when the red-breasts frequent the hedges and bushes, sticks are passed transversely through them, on which limed twigs are fastened, then two persons gently beat the hedge or bush to drive the birds towards the twigs, where they are soon caught, for red-breasts have the habit of perching on all the little low projecting branches, in order that they may discover earth-worms. This sort of red-breast chase is very common in Thuringia, where many persons keep them. Limed twigs may also be put in a bare place with earth or meal-worms, just as for the dunnock. The small nightingale net and the white-throat trap catch many. They are also caught at the water trap; but the greatest number are caught in autumn with the noose, baited with elderberries, which are at that season their favourite food. If they are caught

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* I have seen some in cages which were entirely fed on white bread which was soaked in hot milk left to get cold, and they were very healthy. If, however, we would feed them well, they require nearly the same diet as the nightingale.—TRANSLATOR.

for the room (and it is a pity to hunt so pretty a bird for the table), it is necessary, in order to preserve their feet, to cover the springes with felt or cork.

Attractive Qualities.—His pretty plumage, tricks, and great sociability would be enough to make him charming. He is soon tamed, so as to come upon the table and eat from a plate or the hand; his cheerfulness and agility must also give pleasure, always in motion, and bowing after every hop and calling "*sisri;*" but he is particularly valued on account of his song. This song is generally more perfect and altogether superior when he is caged than when hopping about the room. There are however exceptions. The red-breast sings throughout the year, but in spring his voice is most brilliant and his melody most enchanting. In a country residence it is very easy to teach this bird to go and come, whether reared from the nest or caught full grown.

THE BLUE-BREAST.

Motacilla Suecica, Linnæus; La Gorge bleue, Buffon; Das Blaukehlchen, Bechstein.

This bird may be considered as intermediate between the redstart and the common wagtail, having very strong points of resemblance with both. Its length is five inches and a half, of which the tail occupies two and a quarter. The beak is sharp and blackish, yellow at the angles; the iris is brown; the shanks are fourteen lines high, of a reddish brown, and the toes blackish; the head, the back, and the wing-coverts are ashy brown, mottled with a darker tint; a reddish white line passes above the eyes; the cheeks are dark brown, spotted with rust red, and edged at the side with deep ash grey; a brilliant sky blue covers the throat and half way down the breast; this is set off by a spot of the most dazzling white, the size of a pea, placed precisely over the gullet, which, enlarging and diminishing successively, by the movement of this part when the bird sings, produces the most beautiful effect.

Some males have two little white spots on the throat, some even have three, while others have none; these latter are probably very old, for I have observed that as the bird grows older the blue deepens, and the orange band becomes almost maroon.

It is easy to distinguish the female; when young she has a celestial blue tint on the sides of the throat; this tint deepens with age, and forms two longitudinal lines on the sides of the neck; no orange band; the throat and gullet are yellowish blue, edged longitudinally with a black line; the feet are flesh-coloured.

Habitation.—When wild this species exists all over Europe [*]. It is a bird of passage, and when returning towards the north, in the beginning of April, it stops in large flights near streams, in hedges, and damp fields, comes even into courts, and on the dunghills of farms, if surprised by snow and a severe return of cold. In the summer it frequents those parts among the mountains abounding with water; in August it approaches cabbage fields enclosed by hedges or bushes. It is very seldom that one or two pairs build in our country.

In confinement it may be let run about; it soon grows so tame as to come when called, and feed from the hand. Its rapid motions and races are amusing; but it must not be allowed to fly high enough to get on the tables and furniture, as it would soon dirty them. It sings better and longer when caged. The cage should be, like the nightingale's, large enough for the bird not to spoil its beautiful feathers; the tail-feathers easily drop if they are rubbed.

Food.—When wild the blue-breast feeds on all sorts of insects; it also eats elderberries.

In confinement it must at first be fed with ants' eggs, meal-worms, and even some earth-worms. If it is kept uncaged these things must be thrown upon the universal paste, which it will thus learn to relish, but though it is easily reconciled to it, ants' eggs, earth and meal-worms, must nevertheless be occasionally supplied, or it will soon die in decline. When caged it is fed like nightingales, and on that food it will live seven or eight years. It is a great eater, and can devour in a day its own weight of the first universal paste, so that it mutes incessantly. It requires a constant supply of fresh water for drinking and bathing: it wets itself so much that it is completely drenched. I have observed for several successive years that it never bathes till the afternoon [†].

Diseases.—Diarrhœa and decline are its commonest disorders. The treatment has been pointed out in the Introduction.

Mode of Taking.—I often hear it said that the blue-breast is a rare bird; that in some parts of Germany it appears only every five, or even ten, years, but I can declare that this opinion arises from a want of observation. Since I have taught my neighbours to be more attentive to the time of their passage, they every year catch as many as they please. If in the first fortnight of April, up to the 20th, cold and snow return, plenty may be found by merely following the streams, rivers, and ponds, especially in the neighbourhood of a wood. A proper place is chosen, near the water and a bush, meal and earth worms are thrown there, with limed twigs, and soon these poor birds, if ever so little pushed towards it fall blindly into the snare; they also fall into white-throat traps and nightingale nets. In autumn, when they frequent cabbage grounds to hunt for caterpillars, plenty may be caught by planting here and there sticks with limed twigs fastened to them, baited with meal-worms. At this season they sometimes go to the water trap, but this is not usual. If it happens that any are caught in nooses or spring traps baited with elderberries, hunger must have been the cause, and they must have been entirely destitute of food.

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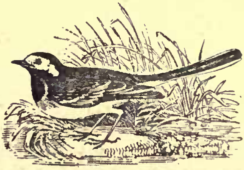
[*] It is rarely seen in Britain.—Translator.

[†] I have made the same observation on the red-start.

Attractive Qualities.—Its beauty, sprightliness, sociability, and song, unite in rendering the blue-breast delightful. It runs very swiftly, raises its tail with a jerk, and extends it like a fan, keeping it and the wings in perpetual motion, uttering the cry of "*fide, fide*" and "*tac, tac.*" It is unfortunate that it gradually loses the fine blue on the breast in successive moultings, when confined to the house, and becomes at length of a whitish grey. In a few days it will become tame enough to eat meal-worms from the hand, and it will not be long before it comes for them when called by the voice or whistle. Its song is very agreeable; it sounds like two voices at once; one deep, resembling the gentle humming of a violin string, the other the soft sound of a flute.

When at liberty in the room it always seeks the sunshine, and sleeps on its belly. Its notes very much resemble those of the common wagtail, but much improved by a violin-like hum.



THE COMMON WAGTAIL.

Motacilla alba, Linnæus; La Lavandière, Buffon; Die weisse Bachstelze, Bechstein.

This species, well known throughout the old world, is seven inches in length, of which the tail measures three and a half. The beak, five lines long, is black, and very pointed; the iris is dark; the shanks, an inch in height, are slender, and black; the upper part of the head, as far as the nape, is black, but the rest of the upper part of the body, the sides of the breast, and lesser wing-coverts, are bluish ash grey; the forehead, cheeks, and sides of the neck are white as snow; the throat, as far as the middle of the breast, is black.

The female is without the white forehead and cheeks, the black top to the head being somewhat smaller. Some females have been found with very little of the black cap, and even without it, the head then being of the same colour as the back.

The young ones, which are seen in large flocks with the yellow wagtail around herds of cattle, are so different before the first moulting, that they have been considered a distinct species, under the name of the grey wagtail (*Motacilla cinerea*). In fact, the whole of the upper part of the body is grey, more or less pale; the throat and belly dusky white; the breast is generally crossed by a band, sometimes entire, sometimes broken, of a grey or brownish colour, and the quill-feathers are whitish on the outer edge.

It is not surprising to find varieties amongst birds so numerous. Some are quite white, others variegated, or speckled with white.

HABITATION.—When wild it is found equally near houses, in the fields and mountains, and in every place where insects and worms are in plenty. It is in Germany a bird of passage, which assembles in autumn on the tiles, like the swallow, to prepare for its departure in the first fortnight of October*. It returns towards the end of February or beginning of March, though the weather be not mild; it may come thus early without danger, as it does not fear to approach houses, on the walls of which it finds flies that the spring sun has drawn from their retreat; and in the streams it also finds abundance of aquatic insects.

In the house it may be kept in a cage, or allowed to range; but in either case it is necessary to scatter plenty of sand about, as it is a very dirty little bird.

FOOD.—When wild, it feeds on gnats, water-spiders, aquatic insects, flies, and insects that fasten on cattle, round which it often roams. It also follows the ploughman to feed on the insects turned up by the plough.

In the house nothing tames it so soon as ants' eggs, meal-worms, flies, and other insects. By degrees it acquires a taste for other food. In the cage it must be fed in the same manner as the nightingale.

BREEDING.—This species breeds two or three times in the course of the season. Its nest, placed in a hole, in a crevice between stones, or even under a tile, is carelessly formed of moss, small roots, hay, or something of the kind, and lined with hair and wool. It lays five or six eggs, of a bluish white, spotted with black. The young ones brought up from the nest become so tame, that they will go and return like a pigeon, build in the room, and seek for food for their little ones in the fields.

DISEASES.—Though very subject to diarrhœa, this and the two following species may be preserved in a room five or six years.

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* It remains all winter in Britain.—TRANSLATOR.

Mode of Taking.—If there is snow on the ground on their return in March, it is only necessary to clear a place (below the window will do), and scatter meal-worms amongst limed twigs, or place these on stones or wood where the birds assemble, or even fasten a meal-worm to a limed twig, loosely stuck in the earth, and you may soon catch a wagtail.

Attractive Qualities.—Its handsome plumage, its sprightliness, its quick and elegant motions, please one as much as its pretty song, which, without being striking, is varied, and continues the whole year, except during moulting. I always keep a wagtail amongst my birds, and when the black-cap, the blue-breast, the lark, and the linnet sing, it seems to form a counter-tenor.

THE GREY WAGTAIL.

Motacilla Boarula, Linnæus; La Bergeronette, Buffon; Die graue Bachstelze, Bechstein.

This beautiful species, like the preceding, is seven inches in length, of which the tail alone measures four. The beak is black; the iris brown; the legs, nine lines high, dark flesh-coloured; the upper part of the body, including the lesser wing-coverts, dark ash-grey; the head slightly tinted with olive, and the rump a fine yellow green; there is a white streak above the eyes, and another, beginning at the inferior base of the beak, descends the sides of the neck, whilst a black streak extends from the superior base as far as the eyes; the chin and throat are black, but the breast and under part of the body are of the finest yellow.

The throat of the female is not black, but pale orange; her colours are generally less bright.

Males a year or two old are without the fine black throat; it is clouded with white.

Habitation.—In their wild state, these wagtails are found throughout Europe; but in the greatest number in mountainous and wooded parts, where the brooks flow over beds of pebbles. They are birds of passage, and return amongst us the end of February or beginning of March. A few have been observed to remain during mild winters, when they take up their abode near dunghills or warm springs.

In the house they should be kept in a nightingale's cage, and treated like one; they are so delicate, that with the greatest care they can rarely be preserved two years.

Food.—When wild they prefer aquatic insects, and are continually chasing them among the plants and stones by the water-side.

In the house they should be fed on the same food as the nightingale, to which they may be gradually accustomed, by throwing amongst it meal-worms and ants' eggs.

Breeding.—Their nests, placed by the water-side, in mill-dikes, or heaps of stones, are formed with rather more art than those of the preceding species. They begin to lay as early as March, five or six white eggs, mottled with flesh-colour. The young ones must be reared on ants' eggs and the crumb of white bread, soaked in boiled milk.

Mode of Taking.—This is very simple; it is only to plant sticks with limed twigs and meal-worms attached to them, on the banks, or in the middle of a stream which they frequent; you will not have to wait long before some are caught.

Attractive Qualities.—They are as pleasing as the common wagtail; but their plumage is more brilliant, and their voice stronger. Their beautiful clear trilling sound renders their song agreeable, though rather short.

THE YELLOW WAGTAIL.

Motacilla flava, **Linnæus**; La Bergeronette du printemps, **Buffon**; Die gelbe Bachstelze, **Bechstein.**

This might almost be mistaken for the female of the preceding species; but it is smaller, or rather shorter, as its tail is not so long, measuring only two inches and a half. The total length of this bird is six inches and a half; the beak is dusky; the iris nut brown; the shanks ten lines high, and black; the upper part of the body reddish grey, with a decided olive tint, which on the rump becomes a canary green; the head inclines more to grey than green, and above the eyes is a reddish white streak; the under part of the body is of a fine yellow, which becomes citron from age, and is palest at the throat and breast.

The back of the female is greyer; the belly of a less beautiful yellow; the throat whitish, and, with the breast as far as the belly, spotted with red or rust colour, in the male.

Habitation.—When wild, this species, better known than the preceding, is found throughout the plains of Europe, running about the pastures amongst the sheep and cattle. They assemble in September, and depart for warmer countries in large flights, uttering the cry "*sipp, sipp!*" in a clear tone; they return in March.

It must be treated like the grey wagtail, in the house; but it is not so delicate.

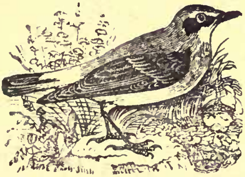
Food.—When wild it feeds on flies and other insects that tease the cattle.

In the house it must be fed like the preceding.

Breeding.—Its nest, made of stubble, and lined with wool, is placed at the water-side, or in a deserted molehill, sometimes in the grass, or corn, like the lark's. It breeds twice in the year, each time laying five or six eggs, grey-blue, spotted all over with reddish grey, and very like those described above. The under parts of the young birds are much paler than in the old ones. They must be reared on ants' eggs and white bread soaked in boiled milk.

Mode of Taking.—These birds are not very easily caught; at least, I have always found it very difficult to succeed; and, therefore, one is reduced to the necessity of placing limed twigs on the nest, which is cruel. If snow should fall, however, after their return in spring, some of them may be taken, by clearing a convenient place, and scattering there meal-worms amongst limed twigs, if you succeed in bringing the birds near.

Attractive Qualities.—Its beauty and agreeable song make this bird a desirable acquisition; but with every possible attention, I have never been able to keep one more than two years.



THE WHEATEAR.

Motacilla Œnanthe, Linnæus; L'Œnanthe, ou Le Culblanc, Buffon; Der Weisschwanz, Bechstein.

This bird, found throughout Europe and the northern parts of Asia, resembles the wagtail in size and air; but its tail being only an inch and ten lines, its total length is only five inches and a half. The beak, seven lines long, is black, as well as the iris and feet; the shanks are an inch high; the forehead white, and a white streak passes above the eyes, crossed by a black line springing from the nostrils, which also tints the cheeks; all the upper parts of the body and the scapulars are of a light ash-grey colour, slightly tinged with a reddish hue.

The back of the female is reddish grey, and the under parts of the body darker than in the male; the lesser wing-coverts are edged with rust-red, and the white of the tail is not so clear as in the male, but is of a reddish tint.

The young ones, before moulting, are spotted with red on a dark brown ground, on the upper part of the body; on the under speckled with orange and black. After moulting, both males and females retain for another year the colour of the female on the back, that is to say, reddish grey.

Habitation.—When wild this species frequents stony and mountainous places; and, during their migration, they may be seen resting in the fields, on the tops of isolated stakes, and other similar places; rarely on trees or bushes. They take their departure during the first fortnight in September, and return towards the middle of April, when white frosts cease.

In the house these birds must be kept in nightingales' cages, or shut up behind a grating, and not suffered to range until accustomed in their prison to their new food; for, unless taken good care of at first, they will soon die. They can rarely be tamed

Food.—When wild they feed on flies and other insects, which they catch as they run along.

In the house they must be given plenty of meal-worms and ants' eggs as soon as they are taken; for, if not fed profusely, they will die, and what is rather astonishing, of diarrhœa, although they have not eaten any of the common house-food. Afterwards they may be fed on nightingales' food, and occasionally on white bread soaked in boiled milk; yet, with every attention, they can rarely be preserved more than two years.

Breeding.—Their nests, formed of stalks of grass and feathers, are generally placed in the crevices of some stone-quarry, sometimes in holes on the banks of streams or rivers, or in an empty mole-hill, or even on a heap of stones. They lay from five to six eggs, of a greenish white. To rear the young ones, they must be taken when half-fledged, and fed on ants' eggs and white bread soaked in boiled milk.

Mode of Taking.—Limed twigs must be placed on the stones or stakes where these birds rest, or even on sticks fixed in the ground for the purpose, and they must be driven gently towards the snares.

Attractive Qualities.—No one would take the trouble to tame a full-grown wheatear, unless passionately fond of keeping birds. I have one, that, by the use of plenty of fresh ants' eggs, has been accustomed to range the room. Its plumage is pleasing, its actions graceful; it is continually waving and spreading its fine tail. Its song is passable, but is interrupted every now and then by a kind of scream.

MR. SWEET'S ACCOUNT OF THE WHEATEAR.

The present interesting species generally arrives in this country about the middle of March, and leaves it again the latter end of September or the beginning of October, though I one year saw a pair in Hyde Park as late as the 17th of November.

In a wild state they are generally to be found on downs and commons, and in Sussex some hundred dozens are caught annually by the shepherds, who sell them for the sake of their flesh, which is very delicious, particularly in autumn, when they become very fat.

This is a very interesting bird in confinement, and is almost continually singing; it will also sing by night as well as by day, if there is a light in the room where it is kept; it has a very pleasant, variable, and agreeable song, different from all other birds, which, in confinement, it continues all the winter. When a pair of them are kept together in a large cage or aviary, it is very amusing to see them at play with each other, flying up and down, and spreading open their long wings in a curious manner, dancing and singing at the same time. I have very little doubt but a young bird, brought up from the nest, might be taught to talk, as they are very imitative.

When wild the present species feeds entirely on insects, so that the more it has given it when in confinement, the better. There are very few sorts of insects that it will refuse, except the common earth-worm; small beetles, cockroaches, crickets, grasshoppers, most sorts of caterpillars, butterflies, moths, earwigs, woodlice, the common maggots, and almost all other sorts of insects it is very fond of, and the more that is given it, the finer will be its song. Its common food is bruised hemp-seed and bread, intermixed with fresh, raw, lean meat; also a little of the yolk of an egg boiled hard occasionally for a change.

THE WHINCHAT.

Montacilla Rubetra, Linnæus; Le Tarier, ou Le Grand Traquet, Buffon; Der Braunkehliger Steinschmätzer, Bechstein.

This is a delicate bird that is met with throughout Europe, among scattered bushes and abrupt declivities. It is four inches ten lines in length, of which the tail measures an inch and a half. The beak is black, as also the legs, which are nine lines high; the upper parts of the body are dusky, in very old birds black, but streaked with pale rust-red, as all the feathers are edged with this colour; a white line, beginning at the nostrils, passes above the eyes as far as the ears; the cheeks are dusky, spotted with chestnut; the throat and breast are yellow, inclining to orange, the former edged with white on the sides and chin.

The colours are paler in the female, the streak above the eyes is yellowish; the upper part of the body dark brown, spotted with rust; the cheeks dark brown; the throat reddish-white; the breast pale orange, with small round, black and brown spots, which gradually disappear from age.

These birds vary till the third year. The young ones, which may be seen perched on cabbages and other plants, even on strong wheat stalks, have the whole of the upper part of the body covered with red and blackish spots, and each feather edged with this colour before the first moulting; the under part of the body is like the female. I killed two in their second year, that still had dusky spots on the breast, though they had become darker on the back; in general, the two sexes may be distinguished by the deep brown of the cheeks and back.

HABITATION.—When wild they generally frequent the skirts of woods. They appear amongst us the beginning of May, and depart towards the end of September. In August they may be seen scattered over the fields, on the stalks of plants, or detached bushes.

In the house they must be kept in a nightingale's cage.

BREEDING.—The nest, constructed of dried grass mixed with moss, lined with hair and feathers, is commonly placed in a tuft of grass in the middle of a meadow or orchard. The females lay five or six eggs, of a fine light blue. Young ones reared on ants' eggs succeed much better than those taken full grown.

MODE OF TAKING.—In spring, when some of these birds are seen in a field or meadow, sticks, furnished with limed twigs, should be stuck there, and the birds gently driven to that side, to induce them to settle, which they will soon do. In summer, the noose, spring-trap, and limed twigs, must be employed in the following manner:—If the noose is used, a stake must be set up, about three feet high, slit at the top to put in crossways a stick three inches long, and the noose is placed an inch and a half above, to be of the height of the bird's breast when it is perched on the stick.

If limed twigs are used, forked switches three feet long should be employed: the fork, four inches in length, must be covered with bird-lime. Spring-traps or gins must be suspended to small stakes or cabbage stalks. As soon as a sufficient number of these spring-traps, snares, and limed twigs, are prepared, they must be carried to a cabbage garden, when a number of these whinchats has been seen; there fix the stakes in cross lines, two or three paces apart; then go to the end of the garden and drive the birds gently towards the snares; they jump from one cabbage stalk to another till they approach the stakes; then you stop, and in a short time the birds are caught one after another. When they are caught, the prisoners must be taken out and the snares arranged again; then go to the other end and again drive the birds forward as before, and thus continue till the sport is over.

ATTRACTIVE QUALITIES.—However gay this bird may appear when free, it becomes sad and melancholy in the house. If permitted to range, it only moves to procure food, and then returns to its accustomed place, and keeps its head sunk on its breast. Its pleasing song very much resembles the goldfinch's; but what makes it more admired, is, that it is not only heard during the day, but also in the evening, and sometimes during the night.

MR. SWEET'S ACCOUNT OF THE WHINCHAT.

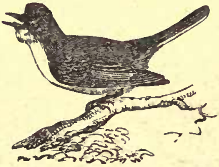
This pretty species is also known by the name of Furze Chat, and is very often confounded with the stonechat, which is a very different species. It generally visits this country in the beginning of April, and leaves us towards the end of September. All the fore part of the season it visits commons, where it may be seen on the furze bushes, flying backwards and forwards after the insects that pass. It builds its nest on the ground in a thicket, which it covers up with dry grass, so that it is impossible to find it without watching the old ones, either in carrying materials to build, or food to their young. I have generally found them with six or seven young ones, which, with care, are easily bred up from the nest, keeping them warm, dry, and clean, and feeding them with the same sorts of food as recommended for the old ones; they should not be taken till quite fledged, and should at first be placed in a little basket with covers, as they will then readily open their mouths for food. I consider those reared from the nest much the best, or such as are caught very young, as they may then be taught any tune, or will learn the song of any bird they hear, their own song not being a very good one.

This bird may be considered as one of the tenderest of the tribe, being very susceptible of cold. It is one of my greatest favourites. One that I bred from the nest by hand, learnt the song of the white-throat, the redstart, willow-wren, nightingale, and also that of a missel-thrush, which it frequently heard singing in a garden near by; of this latter song it was so fond, that we were frequently obliged to put our favourite out of the room, not being able to bear its loud notes; it was certainly the best bird I ever kept of any kind, singing nearly the whole year through, and varying its song continually; the only fault was its strong voice. At last, our favourite was turned out of its cage by a mischievous servant on a cold winter day, when we were from home for about an hour, and we could not entice it back; it most probably died of the cold, or took its flight to a warmer region. I scarcely entertain any hopes of ever getting such another; the food of the present species is precisely the same as the last.

MR. SWEET'S ACCOUNT OF THE STONECHAT.

This, like the preceding, is generally to be found on hills and commons, harbouring chiefly amongst the furze bushes, and feeds, as far as I have observed, entirely on insects. It is not so tender as the whinchat, some few of them occasionally stopping in this country all the winter. It feeds, when wild, on small beetles, flies, as also all sorts of butterflies, moths, caterpillars, woodlice, and various other insects.

In confinement their food must be the same as the whinchat's. They soon become very tame, and if bred up from the nest will learn the notes of other birds, which are in general better than their own. Their own song, though loud, is very short, but they have a strong voice to repeat the notes of another bird.



THE WHITE-THROAT.

Sylvia cinerea, BECHSTEIN; Le Fauvette grise ou Grisette, BUFFON; Die gemeine Grasmücke, BECHSTEIN.

THIS bird is five inches and a half in length, of which the tail measures two and three-quarters. The beak, five lines long, is dusky above and greyish beneath, with the corners and interior of the throat yellow; the iris is greyish brown; the shanks are brownish flesh-coloured, and ten lines high; the head is ash-grey: the cheeks, neck, back, rump, tail-coverts and lesser wing-coverts, are also ash-grey, but tinged with brown, deeper on the back than elsewhere; the throat and belly are fine white.

The female, rather smaller and lighter, rust-coloured on the wings, has not a fine white throat like the male.

HABITATION.—When wild the white-throat is spread through Europe. They leave us the beginning of October, and are then observed to retire from bush to bush, and from hedge to hedge. They reappear towards the middle of April, fluttering about the bushes in the fields, the brambles, thickets, underwood of the low mountains, and the orchards, running about very swiftly.

In the house they must be treated in the same manner as the fauvette; but they are much more delicate. An amateur had better rear young birds, and treat them like nightingales. It is the only way to keep them many years.

FOOD.—When wild these birds are constantly seeking among the bushes for all kinds of insects, grubs, and especially small caterpillars. When, from the air becoming cooler, the supply of this sort of food lessens, they immediately substitute for it currants, cherries, and elderberries.

In the house they must be fed, as we said before, on nightingales' food. They may, however, be given, occasionally, barley meal and white bread soaked in boiled milk; but this food alone will not agree with them, for they will upon it gradually lose their feathers, till at length they become quite bare. It is a good thing in summer to give them elderberries, though they may be red, and in winter dried ones, after soaking them in water.

BREEDING.—The nest is formed of small grass stems and moss, and lined with horse-hair. It is placed in a thick bush, near the ground, or among roots at the water side, sometimes even in tufts of grass. The eggs, from four to six in number, are greenish white, spotted with olive green, and speckled at the large end with dark ash-grey. The young leave the nest so soon that it is difficult to take them from it. Their first plumage resembles full-grown ones, and the females may be known by the fainter tint of fawn brown with which the wing-feathers are edged. I have reared them easily on ants' eggs. They soon learn to peck alone, and are tolerably satisfied with bread soaked in boiled milk; but to keep them long in health they must be fed in the same manner as the nightingale. They are pretty, engaging birds, thus reared, becoming so tame that they will perch and sing on the finger.

DISEASES.—These are the same as those of the black-cap, which may be referred to.

MODE OF TAKING.—The easiest way is to place limed twigs on the nest, but this is repugnant to persons not cruel. Towards the end of summer, spring-traps may be set, with elderberries and gooseberries hung near them. It is difficult to take these birds at the water-trap.

Attractive Qualities.—This bird, gay, lively, and constantly in motion, is a pleasing object in the country. Its song, prolonged far into the night, consists of several strains, which rapidly succeed each other, but must be near for all its beauties to be distinguished, since the soft low tones are only occasionally interrupted by louder notes, which are shrill and follow quickly one after the other. The bird rises in the air as it sings, as if to be better heard, circles round as it ceases, and sinks again into its bush. Its call is a loud *tze*. When the white-throat is alone in a room, its song appears very melodious.

MR. SWEET'S ACCOUNT OF THE WHITE-THROAT.

This is one of the most delightful and pleasing birds that can be imagined. If kept in a large cage with other birds it is so full of antics, in flying and frisking about, and erecting its crest, generally singing all the time, certainly nothing can be more amusing. It is also quite as hardy as the black-cap, and if a good one be procured, it is little inferior in song: but in this they vary considerably, the wild ones as well as those in a cage. I have now one in my possession that I have had about eleven years, in as good health, and singing as well as ever; and certainly no song need be louder, sweeter, or more varied. It is of the same temper as a nightingale, never suffering itself to be outdone. It will indeed sing for hours together against a nightingale, now in the beginning of January, and it will not suffer itself to be outdone; when the nightingale raises its voice, it also does the same, and tries its utmost to get above it; sometimes in the midst of its song it will run up to the nightingale, and stretch out its neck as if in defiance, and whistle as loud as it can, staring it in the face; if the nightingale attempts to peck it, away it is in an instant flying round the aviary, and singing all the time.

In a wild state, the present species is generally to be found in hedges and gardens, and is the most common of our British warblers, visiting us the beginning or middle of April, and leaving us towards the end of September; sometimes a solitary one may be seen in October, but not frequently. It is particularly fond of flies, or a rose-branch covered with aphides will please it very much

THE BABILLARD.

Sylvia curruca, Bechstein; Motacilla dumetorum, Linnæus La Fauvette babillarde, Buffon; Das Müllerchen, Bechstein

This bird somewhat resembles the white-throat, but is smaller, and has less rust colour on the wings. It is five inches long, the tail measuring more than two. The beak is five lines in length, very pointed, black above, and bluish below; the iris has two rings, the outer one pale yellow, the inner a brilliant golden yellow; the shanks, seven lines high, are raven black; the head and rump are dark ash grey; the rest of the upper part of the body is grey, with a reddish tint; the cheeks and the part behind the ears are darker than the head; the throat and under part of the body are white, but the sides of the breast are tinged with reddish grey, and those of the belly with reddish brown.

The birds must be before you to be able to distinguish the two sexes; you can then only perceive that the head of the female is of a lighter colour, and the feet rather blue than black.

Habitation.—When wild this species is found throughout Europe, except the north. It is common in the hedges in Germany, disappearing in September, and returning the middle of April. Its taste for currants often draws it to the garden hedge. It is not very often seen in young coppice wood, scarcely ever on trees *, continually on low bushes.

In the house it must be lodged like the fauvette, and taken the same care of; it is so delicate, that when taken rather old it can rarely be preserved.

Food.—When wild it is the same as the preceding species.

In the house these birds cannot be kept long, unless fed on nightingales' food, mingled with ants' eggs and meal-worms.

Breeding.—The nest is generally found on a thick gooseberry bush, or whitethorn, and on young fir trees in fir woods. It is formed of coarse dried grass, lined with small roots mixed with hogs' bristles. There are five or six eggs, white, spotted at the large end with grey and yellow brown in a circle. The female's attachment to her brood may be known from her dropping from her nest almost fainting as soon as any one approaches, uttering anxious cries, fluttering on the ground, and slowly retiring from the nest. Scarcely are the young ones fledged, when, if looked at, they will dart like an arrow from the nest, and run and hide themselves among the bushes. If you wish to rear them, they must be taken as I have directed for the fauvette, remembering that the male and female cannot then be distinguished.

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* This is a mistake, as it likes to frequent high elms.—Translator

Diseases.—These are the same as in the fauvettes.

Mode of Taking.—If snow should fall after their return, a place near a hedge should be cleared, and limed twigs fastened to the lower branches; after having thrown meal-worms there, the birds should be gently driven towards it, and for the sake of the worms they will creep under the limed twigs, and remain caught.

Attractive Qualities.—Though the plumage is not very striking, yet this bird is very pretty. Some clacking tones, rather like the noise of a mill, have given it in Germany the name of the *little Miller;* as these notes are heard more distinctly than the others, they are erroneously thought to be its whole song; but the rest, certainly very weak, is so soft, so varied, so melodious, that it surpasses other warblers. Whilst singing in this under tone it is continually hopping about the bushes, but when going to utter *clap, clap,* it stops and employs the whole strength of the larynx to pronounce this syllable. To enjoy the beauty of its song it should be alone in a room, and then no other singing bird is more agreeable, as it rarely utters its call.

MR. SWEET'S ACCOUNT OF THE BABILLARD.

This is a handsome, little, lively species, more elegant and smaller than the white-throat, and of a purer colour; its throat being as white as snow. It generally visits us the beginning or middle of April, and leaves us again the end of August or beginning of September. Its song is not so agreeable as most of the other species of warblers; but it is soft and pretty, and very different from any other. It is also more valuable by being much more rare; some seasons very few visit us, in others they are sufficiently plentiful. Its habits are somewhat similar to those of the white-throat, but it is much more quarrelsome, sometimes so much so, that it must be taken from the other birds or it will worry them to death, even if they are double its size.

In confinement it will soon become tame and familiar, and will readily take to feed on bread and milk, and also on bruised hemp-seed and bread. One that I bred up from the nest became so attached to its cage, that it could not be prevailed upon to quit it for any length of time. When the door of it was set open, it would generally come out quickly, and first perch on the door, then mount to the top of the cage, thence it would fly to any other cages that were in the room, and catch any flies that came within its reach · sometimes it would descend to the floor, or perch on a table or chair, and would fly up and take a fly out of the hand, or drink milk out of a spoon if invited: of this it was very fond. As soon as it was the least frightened, it would fly immediately to its cage, first on the top, thence to the door, and would enter in exactly as it came out. I have often hung it out at the window perched on the top of its cage, with the door open, and it would never attempt to fly away. Sometimes if a fly should happen to pass near it, it would fly off and catch it, and return with it to the top of the cage; after remaining there a considerable time, it would either return into it, or fly in at the window, and perch on the cages of the other birds. It is rather more tender than the white-throat.

MR. BLYTH'S ACCOUNT OF THE BABILLARD.

The warble of the babillard (*Curruca garrula*, Brisson) is pretty and lively, but its song is rendered monotonous in the spring and summer by the constant repetition of its loud note of defiance, analogous to the clear lively note with which the black-cap generally concludes: this may be expressed by the monosyllable *see*, repeated nine or ten times in quick succession, and at times very loudly: it is a note, which, though agreeable enough when only heard occasionally, becomes quite tiresome when continually reiterated. This species, however, can warble very sweetly if it please, and, in confinement, during the first months of the year, its song is heard to great advantage in a room; it then rarely repeats its loud *see see see*, and when, at that time, the above-mentioned note is uttered, it forms, indeed, an agreeable variety. The song of the babillard is formed of a number of soft chirping notes, many of which are extremely sweet and musical, and though at times tolerably loud, yet they are generally delivered in a very low tone, scarcely audible at a little distance. The male is almost perpetually singing, erecting his crest and the feathers of his throat in the manner of a white-throat, and, like that species and the furze warbler, he is in constant motion the whole time, throwing himself into a variety of odd gesticulations. The song of this bird is very superior to that of many white-throats, but not to all; he has none of those harsh sounding notes which so often disfigure the white-throat's song. He seems also to be always in such high spirits as not to know how to contain himself, taking frequently a long circuitous flight from tree to tree, and back again, a dozen times, seemingly for no other purpose than mere exercise; but he never mounts singing into the air, like the white-throat. There are yet many persons, I believe, who consider this species to be "a mere variety" of the white-throat. These two species differ from each other in size, in make, in colour, in their manners, their habits, their song, in the structure of their nest, and in the marking of their eggs; and surely, "if all these circumstances (as Wilson observes, after making similar remarks on two American birds, one of which had been considered a 'bastard' production of the other) be not sufficient to designate this (the babillard) as a distinct species, by what criterion, I would ask, are we to discriminate between a *variety* and an *original species*, or, to assure ourselves, that the great horned owl is not, in fact, a *bastard* goose, or the carrion crow a mere *variety* of the humming bird?"

THE BLACK REDSTART.

Motacilla Tithys, Linnæus: Le Rouge-queue, Buffon; Der Wistling, Bechstein.

Length five inches and one quarter, of which the tail alone measures two and one quarter. The beak is five lines long, very pointed and black, the inside and corners yellow; the iris is dusky; the shanks are nine lines high, and black; the upper part of the body is dark bluish, or blackish gray; the rump is red; the cheeks, throat, and breast, are black; the belly and sides are of the same dark colour as the back, but tinged with white; the vent is reddish yellow.

The upper part of the body in the female is dusky ash grey; the under part ash grey, with a reddish tinge.

The colours of this bird vary during the first eight years; the oldest ones, with the exception of the tail and wings, are in general black, but deeper on the under part than the upper; the very oldest have a greyish breast.

Those a year or two old very much resemble the females.

having the upper part of the body ash grey, but the under rather more of a reddish colour; the quill-feathers have a more decided border. After two years the depth of the colour gradually increases. Several birdcatchers, and from them some authors, have considered these birds of different ages as different species.

Habitation.—In its wild state the black redstart is fonnd in the temperate parts of Europe and in Asia in the same latitudes*. They seem to prefer mountainous districts to wide plains, and they are seen in great numbers on bare chalk-hills; if found in woods, it is only in those that are on rocks. They frequent towns and villages, perching on the highest buildings, towers, steeples, churches, and castles †. In spring and autumn it hops about the hedges. It arrives early in the spring, its song is heard in the beginning of March, and it quits us in small flights towards the middle of October. It possesses one quality, not common among singing birds, that of singing all the year, or, at least, whilst in our country, however cold and stormy the weather may be.

In the house it should be kept in a nightingale's cage, or at least not permitted to range the room.

Food.—When wild it feeds on flies, drawn by the warmth of spring from their retreat, and settled on walls; afterwards on cabbage caterpillars and other insects, and in autumn on berries.

In the house they may be kept in health a long time, if the above insects are procured for them, or if fed on nightingales' food, adding occasionally ants' eggs and meal-worms.

Old birds taken in autumn may sometimes be tamed and accustomed to eat the common food in the room, by putting amongst elderberries, in autumn, ants' eggs, and meal-worms at other seasons. They have been known to live five or six years in a cage.

Breeding.—This bird makes its nest in the holes of rocks and walls, particularly in high buildings, on the timbers of barns, and places it at a distance from any other. It is constructed of hay, mixed with the hair of animals. Each laying (for there are two in the year) consists of five or six white eggs. The young have a reddish grey plumage, and should be taken from the nest when the tail is half grown, if it is wished to rear them. They should be fed on ants' eggs, and white bread soaked in boiled milk.

Diseases.—These are the same as those of the fauvette.

Mode of Taking.—Limed twigs, with meal-worms fastened to them, should be laid wherever these birds are most frequently found. Towards winter they may be caught in spring-traps with elderberries hung opposite.

Attractive Qualities.—Its call, "*fitza*," being very similar to the nightingale's, has given rise most probably to its name of Wall Nightingale, which it has in common with the following species. Its song certainly cannot enter into comparison with that of the nightingale, for it is sad, and consists of only three strains, the middle one scarcely more than croaking; the other two may boast of a few high clear tones; it may be heard from early in the morning till night. It is always gay and active, its motions light and nimble; it shakes its tail quickly from side to side at every hop or spring, and utters continually the cry "*fitza*[*] !"

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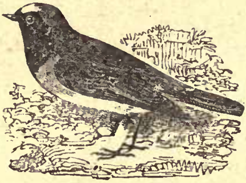
* It is rare in England.—Translator.

† It is a remarkable fact, that this bird, now so common in Thuringia, was a rarity there twenty years ago. This change cannot be attributed to climate or food. What is the occasion of it then?—Author.



THE COMMON REDSTART.

Motacilla Phœnicurus, **Linnæus**; Le Rossignol de muraille, **Buffon**; Das Gemeiner oder Garten-Rothschwänzchen, **Bechstein**.

Its length is five inches and a quarter, of which the tail measures two and a quarter. The beak is five lines, the tip is blunt, black on the outside, yellow within and at the corners; the iris is black; the shanks are of the same colour, and ten lines high; the base of the upper mandible and cheeks are black, as also the throat, but this is speckled with white; the white on the front of the head unites with a streak of the same colour, which extends above the eyes; the back of the head and neck, the back and lesser wing-coverts, are dark ash grey tinged with a reddish colour; the rump, breast, and sides, are red inclining to orange.

The female is very different, very much resembling that of the black redstart, yet its colours are rather lighter. The upper part of its body is reddish ash grey; the whitish throat is not clouded with black till the fifth or sixth year; the breast is dusky rust-red waved with white; the belly is dusky white; the rump is reddish yellow*.

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[*] In sitting on house eaves, and singing in the autumn, it performs a similar part in Germany to the redbreast in Britain. No redbreast on the Continent becomes familiar about the house like ours; they keep always in the woods.—Translator.

It is not till after the first moulting that the distinction between the plumage of the males and females is obvious; even then the breast of the male retains the black tinged with white, but loses this tint in the course of the following summer; the males also have for some time a white streak on the forehead, that passes above the eyes, and the belly is more white than rust-red.

HABITATION.—In a wild state these birds are found in Europe and Asia, and are very common in Germany and England. They leave us the beginning of October, and return the end of March or beginning of April. At this time and in autumn they haunt hedges and bushes; but in summer they principally frequent gardens, the banks of streams planted with willows, and even forests. Those that frequent gardens also enter towns, and will perch on the roofs of the houses, enlivening the inmates with their song from morning till night.

In the house, if given a cage, it should be of such light wire work as not to conceal the beauty of the plumage.

FOOD.—When wild they feed on all kinds of insects, earth-worms, currants, and elderberries.

In the house, if taken in autumn, they may sometimes be induced to feed on elderberries, rarely on the poultry paste. To entice them to this meal-worms must be mixed with it at first, and some thrown in when it is eaten; ants' eggs must be added in spring. These birds are delicate, and always require to be supplied with insects; but never give them earth-worms, as they do not digest them easily. If kept in cages they should be given nightingales' food; yet fed in this way it is rare to preserve them above three or four years; they generally die of consumption or atrophy.

BREEDING.—The red-start generally places its nest in a hole of a tree or wall; it is negligently formed of moss, stalks of grass, feathers, and hair. The female has two broods in the year, and each time she lays from five to seven eggs, of an apple green. Scarcely have the tail-feathers begun to grow ere the young ones hop from the nest and perch on some neighbouring branch, where they receive food from the parent birds till they are able to seek it for themselves. Their plumage before moulting is ash grey spotted with white. The young females resemble the nightingale so much in autumn that they are often mistaken for it. Bird-fanciers should rear these birds on ants' eggs, with white bread soaked in boiled milk occasionally, and thus accustom them to the common universal paste. They learn to repeat parts of the songs of their companions.

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* At a very advanced age the female acquires all the colours of the male, yet less bright, as I have observed of several birds. Such females do not breed afterwards, and in summer fly from place to place. This peculiarity is also observed in hen-pheasants.—AUTHOR.

Diseases.—Diarrhœa and atrophy carry off the greatest number.

Mode of Taking.—Sticks covered with bird-lime should be placed across the hedges frequented by these birds; they must then be driven gently towards them. They are also attracted under nets, and amongst limed twigs baited with meal-worms. In autumn they may be taken in nooses, by suspending elderberries near them, either in orchards or thickets. Those intended for the house should be taken in bird-traps or springes, taking care that the wooden part be covered with felt or cork, to prevent the legs being broken. The young ones of the first year are the easiest to preserve. They also go to the water-trap without difficulty.

Attractive Qualities.—Its plumage, and still more its song and sprightliness, render this a delightful bird. It is always in motion, bowing, and moving its tail from side to side at every step; all its actions are lively and graceful. It can improve its song, composed of some very pretty strains, by adding to it parts of the songs of birds that are found near it. For instance, those that build under my roof imitate tolerably the chaffinch that hangs in a cage at my window; and a neighbour of mine has one in his garden that repeats some strains of a blackcap that has its nest near. This facility in appropriating the song of other birds is rare in birds that live in a state of liberty, and seems peculiar to this species They become so tame that they will take meal-worms from the hand.

MR. SWEET'S ACCOUNT OF THE REDSTART.

This is one of the handsomest of our British birds, visiting us the latter end of March or beginning of April; the earliest arrival ever noticed was the 25th of March, and they generally leave us the beginning of September. When they first arrive they mostly frequent old buildings or out-houses, for the sake of flies and small insects that often abound there. They build their nest in a hole or crevice of a wall, or in a hollow tree. They frequently ascend to the top of the highest tree within their haunt, and there sit sometimes for a considerable time, pouring out their quick and sort of fretful song. When kept in confinement I consider it the most sensible, and, if brought up from the nest, the most attached of all small birds; but it may be considered the most tender of the whole tribe. It is a real mocker, and if bred up from a young one, will learn the note or call of almost any other bird; it will also learn a tune that is whistled or sung to it, and will sing by night as well as day if a light be kept in the room where it is.

I was in possession of a handsome male bird of this species, which I kept more than six years. It became very tame, though an old wild bird when first caught, and it was so attached to its cage, that one day, having got its liberty, it flew away into the gardens, where it stayed six or seven hours, after which it returned to its cage again. In the year 1825 I saw a female bird of this species so late as the 21st of November, flying about as lively as at midsummer; it had probably escaped or been turned out of a cage. When in confinement it is particularly partial to ants' eggs, and also to the common maggots.

THE ARBOUR BIRD

Sylvia polyglotta, RANZANI; Sylvia Hippolais, BECHSTEIN; Le Becfin à poitrine jaune, TEMMINCK; Die Gelbbrust, BECHSTEIN; Die Spotvogel, WICHTERICH.

THIS pleasing bird, which is met with wherever there are groves and bushes *, is five inches and a half in length, of which the tail measures two and a quarter. The beak, seven lines long, is straight, blunt, bluish grey above, and yellow tinged with flesh-colour beneath, with yellowish corners, and the entrance of the throat citron yellow; the iris is dark brown; the shanks, ten lines high, are lead-coloured. The head is pointed in front; the back, rump, and lesser wing-coverts, are olive ash grey; a yellow line extends from the nostrils to the eyes; the whole of the under part of the body is a fine light yellow; the tail and wings are dark brown; the secondary quill-feathers have so wide a white border that it forms a spot on the closed wings.

HABITATION.—In its wild state it frequents orchards, groves, and brambles; but with us it seems to prefer small woods that are interspersed with resinous trees. It arrives the end of April, and quits us as early as the end of August, before the moulting season.

In the house it is kept in a nightingale's cage, in which no change must be made, still less must another be given it, for it would not survive these disturbances. It is so delicate, that if taken when full grown it is almost impossible to tame it.

FOOD.—When wild its food is all kinds of insects, smooth caterpillars, flies, gnats, &c.; and if these are scarce, berries †.

In the house it prefers these insects and meal-worms. It is only with great patience and management that it can be given a taste for the nightingale's food. In general it will eat nothing but insects.

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* It is not found in Britain.—TRANSLATOR.

† This I doubt.—TRANSLATOR.

Breeding.—The nest of the arbour bird is one of those that are so well and curiously formed, commonly placed eight feet above the ground, in the fork of a tree. It is built of pieces of the white bark of the birch tree, dried plants, caterpillars' webs, wool, and the upper layer of down. All these white materials give it the appearance of being made of paper. It is lined with the finest hay. The female lays five eggs, which are at first of a pale rose red, but after having been sat upon some days acquire a dark flesh-coloured tint, speckled with dark red. This species has but one brood in the year, and if the nest is approached two or three times it will desert it, whether the young ones are hatched or not.

If a person wish to have this pleasing bird in the house, as it is often seen in Hesse, he must take the young ones early from the nest, feed them on ants' eggs and bullock's heart chopped small, and always keep them in a warm place. As soon as the arbour bird has been placed in the situation destined for it, it must be left there constantly; its cage ought not to be changed, at least there should be no difference in the one given it afterwards, as without this attention it becomes sad, eats no longer, and dies in a short time. I may observe here, that it moults in December or January whence we may infer that it passes the winter in a southern climate.

Diseases.—These are the same as the nightingale's.

Mode of Taking.—This can rarely be accomplished but by placing limed twigs on the nest, which is a cruel method, and the nest is often deserted as soon as it has been approached. Neither will these birds go to the water-trap; they may be caught occasionally in bird-traps in August, by baiting them with currants [*]. The surest way then is to take them young, especially as the old ones cannot be tamed.

Attractive Qualities.—The song of the arbour bird is sweet, varied, full of power and melody, long sustained; yet some harsh strains have been remarked, and some resembling the notes of the chimney swallow. Whilst singing its throat is much dilated. Its call is *dak*, *dak! hyovie, hyovie!* Its plumage is pretty.

ACCOUNT OF THE ARBOUR BIRD, FROM THE "FIELD NATURALIST'S MAGAZINE."

"British writers, since the time of Pennant and White, have rendered the history of several of our smallest birds a mass of confusion, which even now it will be difficult to clear up, though I feel confident I possess the means of loosening two at least of the knots of the controverted points, as I shall presently show.

"When I was residing, in the summer of 1832, at Bonn, on the Rhine, my friend M. Wichterich brought me a pair of birds with their young, which at first sight, judging from colour and size, I took to be pale canaries, till I looked at their bills;

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[*] Most certainly a mistake.—Translator.

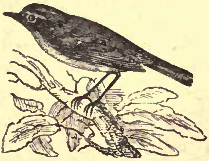
I perceived then that it was a species with which I was unacquainted, and certainly not known as British. I was accordingly not a little surprised when he told me it was the *Sylvia Hippolais* of Bechstein, and astonished when he said it was one of the finest song birds in Europe, very superior to the blackcap and fauvette, and in some respects even to the nightingale. I thence concluded that it was the species whose splendid song had charmed and puzzled me in an orchard at Schiedam, in Holland, and again in the gardens of Prince Maximilian, at Neuwied, on the Rhine; the rich intonation and multitudinous variety of the notes fully bearing out my friend's opinion. This circumstance alone would go far to prove that the species is not British, for it would be impossible so fine a song bird could be concealed, particularly as it haunts gardens, and is rarely found in woods. The very contrary of the statement of Temminck, whose authority, how high soever it may be in other matters, is, with respect to habits and field observations, of not the slightest weight: he might have seen the bird, if he ever looked beyond his cabinet, in most of the gardens about Leyden, where he resides.

"I kept the old birds with their young, which they fed in a cage for some time, but to my great regret they fell a sacrifice to the common enemy of cage birds. About the same time I was delighted to find a nest of the same species in a lilac-tree in my own garden, about half a dozen yards from my parlour windows. Three of the young after leaving this nest were secured, and their mother was caught to feed them, which she did successfully, and I brought them all, and three others, home with me to England. The nest was about seven feet high from the garden level, and ten from the base of a low wall, over which the branch where it was built leaned. The workmanship of the nest is very superior to that of the blackcap, coming nearer in character to that of the finches. The frame-work is rather thick, made of dried grass stems, sewing thread, fine wood shavings, birch bark, and small pieces of linen rag. The inside is very neatly lined with roots, hair, and a few feathers and small locks of wool.

"In the full grown male the bill is about half an inch long, straight, somewhat blunt, broad and flat at the base. The upper mandible has an exceedingly indistinct notch, and is greyish blue; the under mandible yellowish, with a tinge of red; the angles yellowish, and the opening of the mouth lemon yellow. The tongue is yellow, abrupt at the point, and furnished with three bristles. The iris is dusky brown. The forehead is low, flat, angular, and pointed. The eye-brows and eye-lids are yellow, and a yellow line runs from the nostrils to the eyes. The crown of the head, neck, back, and wing-coverts are olive grey, inclining more to green on the rump. The shoulder of the wing (*campterium*, ILLIGER) is yellow: the primary quill-feathers are dusky brown, with a slight fringe of olive grey; the rest of the quill-feathers have a broader fringe of greyish white, which, when the wing is closed, forms a whitish patch. The tail is two inches long, the feathers being of equal length, and of very nearly the same colours and tinge as the wing-quills. All the under parts of the body are of a fine clear lemon colour. The legs are five-sixths of an inch high, and of a lead colour; the claws greyish brown. The whole length is five inches and a half; the extent of the wings nine inches.

The female is sometimes, but not always, rather paler than the male. The young have the yellow parts very pale.

A species very similar to this has been discovered in Italy by Prince C. Buonaparte—the *Sylvia icterina?* of Vieillot, which frequents marshy places.



THE COMMON CHIFF-CHAFF.

Sylva loquax, HERBERT; S Hippolais, MONTAGU; but not the *S. Hippolais* of the Continental authors, which is *S. polyglotta*.

COLONEL MONTAGU AND MR. SWEET'S ACCOUNT OF THE CHIFF-CHAFF.

THIS bird weighs about two or nearly three drachms; the length varies from four inches and a half to five inches.

This species is nearly the same size as the hay-bird. In its plumage it so much resembles that bird, that we shall only make mention here of some essential marks of distinction, and refer our readers to the hay-bird.

Its general colour is not so much tinged with yellow, and the legs are dusky, which in the other are brown.

The plumage of the sexes are alike.

These two birds have been, and are, frequently confounded, and with them the wood wren of this work; but this last is at once distinguished by the under tail-coverts being a pure white, and the plumage of a more lively green on the upper parts than either of the others. The nest, eggs, and notes, will be found also different by consulting and comparing the history of each. This is the first of all the migrative warblers (*Sylviadæ*) in its annual visit, and is, perhaps, the only one that has occasionally been observed with us during the winter, and that only in the milder parts of England. It is generally heard on or before the first of April repeating its song, if that may be so called which consists only of four notes, which seem to express the words *chip*, *chop*, *cherry*, *churry*, four or five times successively. It is a busy, restless bird, always active among the trees and bushes in search of insects. From its early cry in our neighbourhood, we long suspected it would be found that this hardy little bird did not wholly quit us, and in this opinion we were confirmed by seeing one in the garden about Christmas, 1806. In the following January, we observed two of these little creatures busied in catching the small insects which a bright day had roused in great abundance about some fir trees, by springing upon them from the ends of the branches, one of which we succeeded in shooting. Another, which we killed in 1808, on the same spot, while feeding upon a small species of *culex*, weighed one drachm thirty-three grains; this will easily account for the very early cry of this bird in the spring, as it is highly probable that they remain with us the whole year, but are wholly silent in the winter. The earliest we ever heard was on the 14th of March, 1804, when vegetation was unusually early.

The nest of this species is oval, with a small hole near the top, composed externally of dry leaves, and then coarse dry grass, and lined with feathers; and is generally placed on or near the ground, frequently on a ditch bank, in a tuft of grass or low bush. The eggs are six in number, white, speckled with purplish red at the larger end only, with here and there a single speck on the sides.

It seems to be the hardiest and most generally diffused of all our summer visitants; and is found in all parts of the kingdom where wood or hedges afford it shelter and food. Its note is heard long after the hay-bird is silent. Dr. Latham says this is called in Dorsetshire the hay-bird; but as we are inclined to believe the three species before mentioned have been confounded, it is more probable that our hay-bird should obtain that name, as its nest is composed of that material.

Mr. Sweet tells us, "it is readily taken in a trap baited with small caterpillars. They soon get familiar in confinement; when first caught, they should, if possible, be put with other birds, and they will readily take to feed on bruised hemp-seed and bread, and on bread and milk, which must at first be stuck full of small insects, or a quantity of aphides may be shaken off a branch upon it; when they have once tasted it they will be very fond of it. One that I caught took to eat it directly, and became so familiar, that in three or four days it would take a fly out of the hand. It also learnt to drink milk out of a tea-spoon, of which it was so fond, that it would fly after it all round the room, and perch on the hand that held it, without showing the least symptoms of fear. It would also fly up to the ceiling, and bring down a fly in its mouth every time. At last it got so very tame, that it would sit on my knee by the fire and sleep; and when the windows were open, it would never attempt, nor seemed to have the least inclination, to fly out; so that I at last ventured to entice it out in the garden, to see whether it would return. I with difficulty enticed it out at the door with a spoon of milk; it returned twice to the room; the third time it ventured into a little tree; it then fled and perched on my hand, and drank milk out of the spoon; from thence it flew to the ground on some chickweed, in which it washed itself, and got into a holly-bush to dry. After getting among the leaves, I could see no more of it, but heard it call several times. I suppose after it got quite dry that it left the country directly, as I could never see or hear it afterwards, and it was then the end of November, when all the others had left for some time*."

THE RUFOUS CHIFF-CHAFF.

Sylvia rufa, BECHSTEIN; La Fauvette rousse, BUFFON; Der Weidenzeisig, BECHSTEIN.

THIS and the gold-crested wren are the smallest of our European birds.

The full-grown male has the bill a third of an inch in length, very narrow, and pointed; of a blackish brown, except at the edges and within, where it is yellow. The iris is dusky brown. From the base of the bill on each side there runs a narrow yellowish white streak, and there is another straight streak of a dusky yellow over the eye. The sides of the head are of a very clear brown. The upper part of the head, neck, and back, are greyish brown, with a slight tinge of olive. The throat is greyish white; the breast light grey, with a very pale tinge of red, or rather rust brown. The belly is greyish white, with faint yellowish streaks.

The females and the young males, before the first moult, have the upper parts of a clear olive green, and the under parts reddish white.

I have never met with the nest; but it is said to be built on the ground amongst fallen leaves, domed, with a side entrance, and lined with feathers. The eggs are said to be from four to seven, white, with reddish black dots, most crowded at the larger end.

The young branchers may be caught in autumn by means of the owl, with limed twigs, and fed on ant's eggs and small meal-worms. They will also soon take to bread and milk, or German paste, and become exceedingly tame, but are very impatient of cold.

It is most probably a native of Britain, like the preceding; but is not yet distinctly proved to be so.

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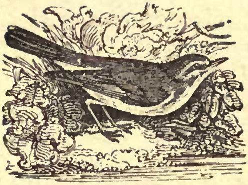
* Sweet's British Warblers.



THE HAY-BIRD, OR WILLOW WREN.

Sylvia Fitis, BECHSTEIN; S. Trochilus, LATHAM; Le Bec-fin Pouillot, TEMMINCK; Der Fitis Sanger, MEYER; Der Weidenblatt, BECHSTEIN.

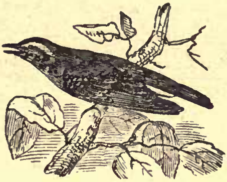
THIS species weighs about two drachms and three quarters; length five inches and a quarter. The bill is dusky above, yellowish beneath; irides hazel. The whole upper parts of the plumage are of a greenish yellow brown: the under parts are white, tinged with yellow; on the breast are a few yellow streaks; legs light brown.

This is a plentiful species in some parts; frequents wooded and enclosed situations, especially where willows abound; is frequently found with the wood wren, but does not extend so far to the west in England, as it is rarely met with in Cornwall. It comes to us early in April, and soon begins its usual song, which is short, with little variety. About the latter end of the same month, or beginning of May, it makes a nest of an oval shape, with a small opening near the top, composed of moss and dried grass, and lined with feathers. This is placed in the hollow of a ditch, or in a low bush close to the ground.

MR. SWEET'S ACCOUNT OF THE HAY-BIRD.

This is another little favourite songster, and a most deserving one it is. It visits us the latter end of March, or beginning of April, and leaves us again at the end of September, or beginning of October. On its first arrival, it enlivens our woods and groves with its lively piercing song and gay frolics, flying about from tree to tree, and catching the small gnats and flies that come in its way. It builds its nest on the ground in a thicket amongst dead leaves and moss, with a covering on the top, of the same materials as those lying all around, so that it is impossible to find it without watching one of the old ones to the nest, which in general consists of six or seven young ones. These may either be brought up from the nest, or if an old one be caught wild it is easily tamed. When first put in the cage with a tame bird, the general food, bread and milk, and eggs, should be stuck full of small flies, aphides, small caterpillars, or other small insects, in picking out which it will taste the other food, and soon take to eat it readily, and will soon become very tame in confinement. One that I caught in September was, in three days afterwards, let out of the aviary into the room to catch the flies, that were numerous at that season. After amusing itself for some time in catching flies, it began singing; and it did the same several other times when it was let out, and in a few days began to sing in its aviary. It soon became so familiar, that it would take flies out of the hand; and when out in the room, if a fly was held towards it, would fly up, and take it immediately.

Although the present species is so small a bird, it is very courageous, being generally the master of the cage, and as it is so fine a songster, and almost continually in song, no little bird can be more desirable in a cage with other birds; its note, when in full song, being so loud and shrill, that its voice is plainly heard above the nightingale's when both are in full song.



THE WOOD WREN.

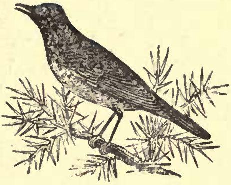
Sylvia sibilatrix, BECHSTEIN; Le Bec-fin Siffleur, TEMMINCK; Der grüne Sanger, MEYER.

THIS bird remained long unnoticed as a distinct species, from its resemblance to the hay-bird (*Sylvia Trochilus*), with which it is still frequently confounded. It measures in length five inches and a half; bill horn-colour; upper mandible bent at the tip, and rather longer than the under; irides hazel; nostrils beset with bristles; top of the head, neck, back, and tail-coverts olive green; throat and cheeks yellow, paler on the breast; belly and vent of a most beautiful silvery white; through the eye passes a yellow line; legs rather more than an inch long, of a horn-colour, claws paler.

MR. SWEET'S ACCOUNT OF THE WOOD WREN.

This elegant and beautiful little species ranks itself amongst my list of favourites. It visits this country the beginning of April, and leaves it in August, or the beginning of September. It is generally to be found in summer amongst tall trees in woods and plantations, where it is readily detected on its arrival, by a shrill shaking sort of note that may be heard at a great distance, and cannot be confounded with any other bird. On its first arrival it sings the greater part of the day, and continues its song, more or less, through the summer, except at the time it is engaged in feeding its young. Its nest is built on the ground in a thicket amongst moss and dead leaves, so that it is impossible to find it without watching one of the old ones to the nest, which is easily done when they have young. They may either be tamed when old, or reared from the nest, and are not difficult to be caught when young with a little bird-lime at the end of a fishing-rod, as may several other species of this interesting group.

As the present species feeds entirely upon insects when wild, the greater part of which it catches on the wing, it will be useless to give it any sort of fruit or berry; but bread and milk, bruised hemp-seed and bread, with bits of fresh lean meat cut very small and mixed up in it, will be its general food. It is also very fond of the yolk of an egg boiled hard, and crumbled small, or stirred up with the point of a knife that it may peck it out of the shell as it likes. Sometimes these birds are apt to get off their other food, and will live on egg several days; at such a time if a few flies could be procured for them, it would be the most likely to restore their appetite.



THE GRASSHOPPER BIRD.

Locustella avicula, RAY; Sylvia locustella, LATHAM; L'Alouette locustelle, BUFFON; Der Fleuschrechensanger, MEYER.

THIS species is less than the white-throat; length five inches and a half; weight about three drachms and a quarter. The bill is dusky above, whitish beneath; irides light hazel. The whole upper parts of the bird are olivaceous brown; the middle of each feather dusky, except on the back of the neck, which gives it a pretty spotted appearance; the tail is much cuneiform, and the feathers somewhat pointed, which is a very marked and peculiar character in this species; the outer feather being full an inch shorter than the middle ones, and nearly rounded at the tips, the wing remarkably short, reaching very little beyond the base of the tail; legs very pale brown; claws light-horn colour; hind claw short and crooked.

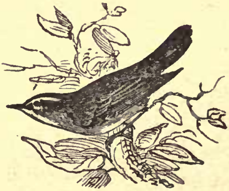
In shape, the grasshopper warbler very much resembles the sedge-bird; is rather inferior in size, and at once distinguished by its spotted back.

MR. SWEET'S ACCOUNT OF THE GRASSHOPPER BIRD.

The present species is known amongst bird-catchers by the name of the grasshopper lark, and it was originally placed amongst the larks by ornithologists, but has been very properly removed from them by later authors, as it wants the most characteristic mark of that family, namely, its long claw. It is a very rare bird in the neighbourhood of London, and I have never been able to procure but one of them, which I lost the first winter, by letting it wash too much; in confinement it requires the same sort of management as recommended for the two last species, and it will succeed very well. I am not acquainted with their song, never having lived in any neighbourhood where they visit, but I have been credibly informed that they have none but a note like the chirping of the grasshopper; this may probably be the case, but I have often heard the same report of some of our finest songsters, which people had confused with very common birds, there being very few who do not confuse, under the general name of white-throats, the common fly-catcher, both white-throats, the greater pettychaps, and the blackcaps, when young; and many even confuse with these the willow wren, wood wren, and lesser pettychaps: this tribe of birds being only summer visitants, are less known than any others.

These birds are not uncommon in several parts of England; they are said to be plentiful on Malmesbury Common, Wiltshire, in summer, where they breed; they are also frequently seen in Norfolk and Suffolk, and in various other parts, where they build their nest among some high grass or sedge, in which it is so concealed that it is with difficulty found, except by watching the old birds carrying food to their young ones; or when building, they may be seen carrying materials to construct their nest.

In a wild state these birds feed entirely on insects, such as flies, moths, butterflies, spiders, ants; and their eggs, small beetles, and numerous other sorts, so that in confinement they will frequently require insect food.



THE REED WARBLER.

Sylvia arundinacea, LATHAM; La Fauvette des Roseaux, BUFFON; Der Teichsänger oder Sumpfsänger, BECHSTEIN.

THIS species has been confounded, not only with others with a greenish plumage that are analogous, but in describing it with the reed thrush (*Turdus arundinaceus*, Linn.), and in its manner of life with the black-bonnet, or reed bunting (*Emberiza Schœniclus*, Linn.). It is five inches in length, of which the tail measures two. The beak, seven lines long, resembles that of the arbour bird, brown above and yellowish beneath; the iris is chestnut brown; the shanks are eight lines high, and ash grey; the forehead is very long, greenish grey; the rest of the upper part of the body, including the wing-coverts, are of the same colour, tinged with olive; the rump is paler; a straw-coloured line extends above the eyes; the cheeks are olive brown; the under part of the body is yellowish white; the knees are olive grey; the anterior quill-feathers are dusky; the secondary are dark brown; all are edged with olive grey; the tail-feathers have the same colour as the quill-feathers, but with a wider olive grey border; the tail is very much rounded, and nearly wedge-formed.

There is little difference in the female. Her head is pale brown: a white line passes across the eyes; the upper part is reddish grey, tinged with olive; the under part, except the throat, which is white, is pale grey, tinged with yellow; the quill-feathers are darker brown than the tail, with an olive grey border.

Habitation.—When wild they are found throughout Europe, wherever rushes and reeds abound. They arrive in Germany towards the middle of April, and leave it the beginning of September. As they are very delicate, in the house they must be kept in a nightingale's cage.

Food.—When wild it feeds on all kinds of aquatic insects, and, when these fail, on berries. In the house, independently of nightingale's food. it requires in a cage all the insects that can be caught, as flies, water spiders, and gnats.

Breeding.—The nest, rather long and very ingeniously fastened to the stems of the reeds or the branches of bushes by the water side, is constructed of pieces of dried grass, of which the largest are on the outside, and the finer within; these are sometimes mixed with wool and hair. The eggs, five or six in number, are greenish white, streaked and speckled with olive green. The young ones can only be reared on ants' eggs.

Mode of Taking.—These birds are sometimes caught by placing lime twigs on a place cleared of the turf, and throwing meal-worms there.

Attractive Qualities.—The song of the reed warbler very much resembles that of the arbour bird, but is not so full; what renders it so agreeable is, that its varied melody is heard during evening and morning twilight

MR. SWEET'S ACCOUNT OF THE REED WARBLER.

This is a very variable bird in its colours, some being of a very pale colour, and others altogether as dark, and those that are pale one season frequently become dark the ensuing one. It is a curious little lively bird, known often by the name of reed wren. It generally makes its appearance with us the beginning of April, and leaves us in September. Its early or late departure seems to depend a good deal on the warmth or coolness of the seasons. It is a very merry bird, almost continually singing, and will sing by night as well as by day, sitting amongst the reeds, or in some bush or tree near the water, where it feeds on the gnats and other insects that infest moist situations. It is very fond of flies, spiders, small caterpillars, moths, grass hoppers, crickets, and many other insects, and will swallow a larger one than could be imagined for so small a bird. In confinement it will feed readily on the general food, and is also very fond of the yolk of an egg boiled hard, so that it may be crumbled on the top of the other food, or put in the cage in an empty egg-shell. It should also be supplied with a few insects occasionally, such as flies, spiders, small caterpillars, moths, or butterflies. Being an inhabitant of the sides of ditches and rivers, it is very partial to washing, which it must not be allowed to do in winter, or it will wash itself until it is so weak that it can never recover.

THE SEDGE BIRD.

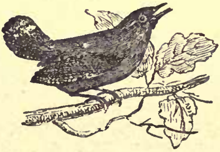
Sylvia Phragmitis, BECHSTEIN; S. salicaria, LATHAM; Le Bec-fin Phragmite, TEMMINCK; Der Schilsänger, MEYER.

The weight of this species is about three drachms; length five inches and a half; bill dusky above, whitish beneath; irides hazel; crown of the head and whole upper parts of a yellowish brown, plain on the back and sides of the neck, rump, and upper tail-coverts; tail like the quills a little cuneiform, which, when spread, gives it a rounded shape; legs dusky.

MR. SWEET'S ACCOUNT OF THE SEDGE BIRD.

In habit and manner the present species approaches to the former, but is a much handsomer bird; though not so rare, it frequents the sides of ditches, ponds, and rivers, like the last species, where it pours forth its variable diurnal and nocturnal song almost incessantly, on its first arrival in this country, which is generally the beginning of April, leaving us again about the middle of September. It builds its nest in a thicket of reeds, or other tall water-grass, on which it is fastened up with the webs of caterpillars, similar to that of the former, which is fastened to the branches of trees, so that no wind or storm can move it.

The song of the present species is somewhat similar to that of the last, but is more shrill and chattering; some people prefer it to that of the latter species, but I do not, as it wants some fine deep notes that the other possesses: it is also an imitative bird, its song being intermixed with the call of the sparrow and parts of the songs of other birds. Its food is precisely the same as that of the last species; and in confinement the treatment for both must be exactly alike.



THE WREN.

Motacilla Troglodytes, Linnæus; Le Roitelet, ou Trog odite, Buffon; Der Zaunkönig, Bechstein.

This, except the rufous chiff-chaff and the gold-crested wren, is the smallest bird of our climate. It is only three inches and a half in length, of which the tail measures one and a half. The beak is five lines, rather curved at the point, dusky above, yellowish white below, and yellow within; the iris is hazel brown; the shanks are seven lines high, and greyish brown; the upper part of the body is dusky rust brown, with indistinct dark brown streaks across.

The female is smaller, of a redder brown, and confusedly streaked across; the feet are yellowish.

Habitation.—When wild it is found all over Europe, and particularly frequents mountainous and woody places. It does not quit us, but remains in winter, as in summer, near our dwellings.

In the house, on account of its liveliness, it is given rather a large cage, the bars of which should be very near together. If allowed to range it may easily escape through small openings, as it is very fond of penetrating such crevices.

Food.—At liberty, it consists throughout the year of small insects, which it seeks in winter in barns, stables, cellars, holes in walls, and piles of wood. In autumn, however, it will eat both unripe and black elderberries.

As soon as it is brought into the house it must be plentifully supplied with meal-worms, flies, elderberries, and then gradually add nightingales' paste, which will soon become its ordinary food. It is only by adopting this method that I have been successful in preserving one of these birds.

Breeding.—Any nook appears to suit the wren to build its large nest in; which may be found in a hole of a tree, amongst the roots, under a roof, or a cavity under ground; every place is suitable, provided the nest can be concealed. This is oval, covered with moss on the outside, and lined with feathers and hair. It has an opening at the top or side to go in and out by. The female lays from six to eight pretty little white eggs, speckled with red. The young ones are rusty red, spotted with black and white. They may be reared on ants' eggs, adding, as soon as they can fly, the universal paste; but they always prefer ants' eggs.

Mode of Taking.—If in winter, a white-throat trap is set in a place much frequented by these birds, and meal-worms scattered within and around it. In this the wrens will surely be caught. They may be entrapped in autumn with spring traps and springes, by hanging elder-berries before; but, after every precaution, they generally break their legs.

Attractive Qualities.—Its sprightliness is pleasing, and its actions gay and varied. It has a very powerful voice for its size, and its song is continued throughout the year; it is soft, and mingled with some notes of the canary, which are the more pleasing as they consist of distinct loud tones always descending. Its call is *tzrr, tzetzererr!* I have never preserved one more than a year, but other amateurs say they may be kept two or three.

THE GOLD-CRESTED WREN.

Motacilla Regulus, Linnæus; Le Poul, ou Roitelet huppé, Buffon: Das Goldhähnchen, Bechstein.

This is the smallest of European birds. It is three inches and a half in length, of which the tail measures one and a quarter. The beak is four lines, slender, very sharp, and black, having the nostrils covered with a feather divided like a comb; the iris is dusky; the shanks are eight lines in height, and brownish flesh-coloured; the forehead is yellowish brown; a black streak extends from the corners of the beak to the eyes, above which is a white streak, and below them a white speck; the top of the head is saffron yellow, each side edged with golden yellow, beyond which is a black band.

The female has the top of the head golden yellow, the forehead and wings grey.

Habitation.—When wild these pretty little birds are diffused throughout the old world, principally frequenting pine and fir forests, and do not appear to migrate, excepting those that inhabit northern countries, and go towards the south in October, and return in March; at least, they are then observed on their passage, in Germany, the hedges being full of them in spring; but those established among us remain, as they are seen all the year. They assemble in small flights in winter, and fly about here and there, like the tits, seeking places where their food is most abundant.

In the house a bell-shaped cage appears to suit them best. Several may be kept together in a part of a room enclosed with trellis work, and with a small fir tree for them to perch on. Reared from the nest, they may be allowed to perch on a tree in the room, which they enjoy so much that they are never far from it; if there are many they will perch in a row, press close side by side, and sleep in this manner.

Food.—In the wild state it feeds on all kinds of small insects and their grubs; they are, however, able to swallow large flies, as the beak has a wide opening.

In the house the gold-crests are soon accustomed to the nightingales' paste, by throwing amongst it at first flies deprived of their wings, or half dead, and at length they will be satisfied with bruised hemp-seed; but they must have insects occasionally, flies, meal-worms cut small, ants' eggs, &c.; finally, to keep them healthy, their paste should be neither too stiff nor too moist, and care must be taken to avoid their swallowing rape or camelin seed, which would immediately kill them *.

Breeding.—The nest, fixed to the extremity of a branch, is round, and very soft, built of moss, caterpillar's cocoons, and tufts of thistle down; it is generally found in low underwood or meadows with woods adjoining, on the first tree towards the east. About nine eggs are laid, the size of a pea, and pale blush red. Those young ones intended to be reared must not be taken from the nest till they are fledged, and it is best to catch them just as they are leaving the nest. They eat readily meal-worms cut small, flies, ants' eggs, and white bread soaked in boiled milk.

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* One of these pretty birds, which I had in my room one winter, ate with pleasure, and appeared to thrive upon, a very simple paste, made of the crumb of white bread dried in an oven and powdered: a teaspoonful of this was put in a cup, and three teaspoonfuls of milk, as hot as it could be made without boiling poured over it.—Author.

Mode of Taking.—As they are not fearful, they may easily be caught by gently approaching the tree where one is perched, and merely striking it with a limed twig fastened to a pole long enough to reach it. It may be brought down also with water, in the manner adopted by M. Le Vaillant, that is, by first putting into a gun the common charge of powder, then a wadding of silk, then, as soon as the bird is within reach, two spoonfuls of water are poured in and covered with a second wadding of silk, which must not be rammed down hard, lest the water should reach the powder below. This load, discharged at the distance of twenty paces, is capable of wetting the bird so completely that it may be taken by the hand; but if there are hedges in the neighbourhood, or if a stronger bird be fired at, a chaffinch, for instance, it may easily escape.

Many gold-crested wrens may be caught by means of a hut set for any small birds, when the way to attract them is known. They come in great numbers to the water trap, and by their often repeated call of *tzitt, tzitt*, give notice of sunset and the arrival of larger birds.

They will soon grow tame enough to eat out of the hand. On account of their delicacy, many often die before a person succeeds in rearing one; but when once accustomed to the house they will live a long time, at least if not hurt by other birds, and if they do not swallow what they cannot digest.

Attractive Qualities.—The smallness of their size, their elegance and beauty, render them a pleasant acquisition; but their song adds to their attractions, for though weak it is very melodious, and resembles that of the canary.

THE HON. AND REV. W. HERBERT'S ACCOUNT OF THE GOLD-CRESTED WREN.

The golden-crested wren and the common brown wren are both very impatient of cold. In confinement, the least frost is immediately fatal to them. In a wild state they keep themselves warm by constant active motion in the day, and at night they secrete themselves in places where the frost cannot reach them; but I apprehend that numbers do perish in severe winters. I once caught half a dozen golden wrens at the beginning of winter, and they lived extremely well upon egg and meat, being exceedingly tame. At roosting time there was always a whimsical conflict amongst them for the inside places, as being the warmest, which ended of course by the weakest going to the wall. The scene began with a low whistling call amongst them to roost, and the two birds on the extreme right and left flew on the backs of those in the centre, and squeezed themselves into the middle. A fresh couple from the flanks immediately renewed the attack upon the centre, and the conflict continued till the light began to fail them. A severe frost in February killed all but one of them in one night, though in a furnished drawing-room. The survivor was preserved in a little cage by burying it every night under the sofa cushions; but having been one sharp morning taken from under them before the room was sufficiently warmed by the fire, though perfectly well when removed, it was dead in ten minutes. The nightingale is not much more tender of cold than a canary bird. The golden-crowned wren very much frequents spruce fir trees and cedars, and hangs its nest under their branches; it is also fond of the neighbourhood of furze bushes, under which it probably finds warm refuge from the cold. The brown wren is very apt in frosty weather to roost in cow-houses, where the cattle keep it warm.

THE ALPINE WARBLER.

Sturnus collaris, LINNÆUS; Motacilla Alpina, LINNÆUS; La Fauvette des Alpes, BUFFON; Der Alpensänger, BECHSTEIN.

THE characteristics of this bird are so equivocal that it is sometimes ranked with the larks, sometimes with the starlings, and sometimes with the *Motacillæ*. It is six inches and a half in length, but the tail alone measures nearly three. The beak is six lines, and is dark brown above and orange beneath; the mandibles are flattish at the sides; the iris is yellow; the shanks are an inch high, and pale brown; a whitish ash grey predominates on the head, neck, and back, but the latter is streaked with dark brown, the others with pale brown.

The female and young ones are variegated with dark brown on the belly; the back is dark, and the spots on the throat less apparent.

OBSERVATIONS.—This species frequents the secondary mountains of Switzerland and southern Germany, and is as common there as the field larks on our plains*. In winter it descends into the valleys, and approaches villages and barns, around which these birds may be caught, in as great numbers as yellowhammers. They are generally seen on the ground, running as swiftly as the wagtail, and will sometimes hop on stones, but rarely perch on trees.

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* It is rare in Britain.—TRANSLATOR.

They feed on seeds and insects, and in the house they should be given bruised hemp-seed, poppy-seed, white bread, and ants' eggs. On this food they may be preserved for several years. Their song is sweet, but sad and melancholy; their attitudes are graceful, and often when they hop they flutter their wings and tail. They build on the ground or in clefts of rocks, which has given them the name of rock larks *.

THE OXEYE, OR GREATER TIT †.

Parus major, Linnæus; La grosse Mésange, ou Charbonnière, Buffon; Die Kohlmeise, Bechstein.

This well-known bird is five inches and five-sixths in length, of which the tail measures two and a half. The beak is blackish, conical, firm, pointed, and without slope, as are the beaks of the other tits; the iris is dark brown; the shanks are nine lines high, and lead blue; the claws are sharp, and adapted for climbing; the upper part of the head is of a brilliant black, which is joined to the black of the throat by a line of the same colour that borders and sets off the white of the cheeks and temples; the nape is greenish yellow, with some mixture of white; the back is fine olive, and the rump pale ash grey; the breast and belly are a yellowish green, divided lengthways by a black line.

The female is smaller, the black on the head and the yellow on the nape are less bright; the line that runs down the belly is narrower and shorter, at least it is lost at the part where in the male it is widest; this marks the difference between young males and females, which are alike in other respects.

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* It is difficult to decide to what genus this species belongs; it has the characteristics of several. Its size, habit, food, mixed insects and seeds, even its pace, for when on the ground it rarely hops like the warblers, but runs quickly head forwards, like the quails, scarcely ever resting on trees; in all this it bears a relation to the larks. Now as there are larks that appear to form the link between that genus and the warblers, the Alpine warbler may be said to form one also between the warblers and the larks.—Translator.

† It is called Joe Bent by the London bird-catchers.—Translator.

Habitation.—In its wild state it is found throughout the old world, but in the greatest numbers in mountainous countries, where orchards and groves abound, and woods of beech, oak, and similar trees, are found alternately with those of fir. Though these birds do not migrate, yet in autumn they assemble and pass the winter together, seeking their food amongst orchards and woods. In autumn, as soon as the bird-catchers see these flights of tits succeed each other quickly, they call it their passage, and immediately prepare snares for taking them. In March each pair separates and prepares for breeding.

In the house, if kept in a cage, this should be of iron wire, and bell-shaped, for the advantage of seeing the birds twirl about, and drop from one stick to another like monkeys. If they be allowed to range, it is necessary to supply them with abundance of the food they like, for if this fails they will attack the other birds, and pierce their heads to eat the brain ; when once they have tasted this food there is no longer safety for the birds around them, whatever their size may be. I have seen an oxeye attack a quail and kill it in this way. Some bird-catchers say that the tits with forked tails are alone addicted to this, but they are mistaken; it is certainly true that some are more cruel than others, experience teaches us this every day.

Food.—When wild they feed on insects, seeds, and berries, destroy many smooth caterpillars, flies, grasshoppers, gnats, and small butterflies, and climb about the trees like woodpeckers, seeking in the moss the eggs and grubs of insects. In autumn and winter they eat all kinds of seeds, especially hemp-seed, fir, and pine-seed, oats, kernels of fruit, mast nuts, and occasionally flesh. They hold these things in their claws, tear them with their beak, and skin them with their tongue.

In the house they will eat any thing on the table, meat, bread, cheese, vegetables, sweet almonds, walnuts, filberts, lard, and all sorts of fat, all pastes adapted for other birds; so that we must not attribute their early death to the delicacy of the tits, but to the want of care in those that have them. The more they eat the more they sing, and the less inclined they are to attack their companions. They drink often, and enjoy bathing.

Breeding.—The oxeye builds in a hole of a tree or wall, sometimes in the forsaken nest of a squirrel, crow, or woodpecker. It lays on an artless bed of moss, wool, and feathers, eight or ten whitish eggs, sprinkled with large and small spots mixed with streaks of dark red, particularly at the large end, where they form a coronet. The young do not quit the nest till they can fly well. The under parts of the body are pale yellow ; and the black about them is not glossy as in the old birds.

Diseases.—In a cage, this species is subject to vertigo or giddiness, occasioned by feeding too much on hemp-seed, which heats it and makes it twirl about too much. To cure the disorder, the bird should be kept for some time in a small square cage, or permitted to range the room. From the same cause often arises atrophy, consumption, and even gout, all which proves the injurious qualities of hemp-seed ; but with care on this point and a little attention it may live eight or ten years.

Mode of Taking.—The chase after tits, is, according to bird-catchers, one of the most agreeable, and is pursued in many ways ; but I shall confine myself to two or three of the surest methods, specifying the best for taking those birds that are for the house.

In autumn and spring, the bird-catcher should go into an orchard, or any other place much frequented by oxeyes, carrying one with him as a decoy; this must be placed on the ground in a small square cage, and some sticks, with lime-twigs fastened to them, fixed obliquely around it. The tits, attracted by curiosity, or the desire of approaching one of their own species that calls them, quickly descend, and are caught in the lime-twigs. A whistle made of the bone of a goose's leg succeeds still better; with this instrument all the tits in the neighbourhood are quickly assembled; for the tone being stronger than the natural call, it is heard farther; if there are but few of these birds near, they are sure to be all caught.

They are easily attracted, in winter, to a trap, by the kernels of nuts, lard, and oats. This trap should be placed in a garden, with a little oat straw fastened under in such a way that it may be seen at a distance, as the tits are instantly attracted thereby. It is a small box a foot in length, and eighteen inches in height and width, the sides of which, when not made of small boards painted green, are formed of small elder sticks, tied or screwed to the four corner sticks; in this case only two small boards are required, one for the bottom, the other for the cover, which must be fastened on with packthread, and turn as with hinges; from the middle of the bottom rises a peg supporting a cross stick, with a nut kernel at one end, and a little lard at the other; this cross stick supports a small perpendicular one, which keeps the cover open three or four inches. When a tit hops on the cross stick and begins pecking the nut or lard, the cover falls, and the bird is caught.

The oxeye, like the other tits, assembles in numbers at the water-trap, commonly from seven to nine in the morning, and from four to five in the evening.

In autumn these birds are taken in nooses and common bird-traps, baited with berries, but the snare must be of horse hair, for if of thread, the bird, as soon as it feels itself caught, will try to bite through it, as mice do.

ATTRACTIVE QUALITIES.—The sprightliness and activity of these birds are very pleasing, but their gay and lively song still more so: in it are agreeably mingled the call "*fick, fick*," and the shrill "*tzizerr*." Nothing, in my opinion, is more pleasing than to hear repeated fifteen or twenty times following these striking notes, "*sitzida, sitzida, stiti, stiti*." One may judge of the capability of young ones to imitate the song of other birds, from the facility with which the full-grown birds learn detached parts, and particularly different calls.

Some people amuse themselves by making these birds perform many little manœuvres, such as drawing up their food with a chain, turning a cylinder* which has the appearance of being moved by two miners, and hopping after a nut suspended to a thread.

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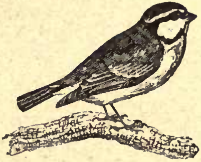
* This cylinder oftens occasions their death. It is only by great address and quickness that they can pass through the hole of communication; each time they run the risk of being crushed, especially on coming out, from the prolonged motion of the machine.—TRANSLATOR.



THE COLE TIT

Parus ater, Linnæus; La petite Charbonnière, Buffon; Die Tannenmeise, Bechstein.

The length of this bird is four inches and one-sixth, of which the tail measures one and three-quarters, and the beak one quarter. The back is black, with the tip lighter; the iris is dusky; the shanks are eight lines high, and lead blue; the upper part of the head and neck are black; there is rather a broad streak of white at the back of the head and down the nape of the neck; the cheeks and sides of the neck are also white, forming, when the bird is at rest, a triangular spot; the back is dark bluish ash grey.

The female is not easily distinguished from the male, unless both are before you; its being a little less black on the breast, and a little less white on the sides, are the only differences.

Habitation.—When wild these birds are seen in great numbers in pine forests, and seldom, except during their wanderings in autumn, winter, and spring, are they met with in other kinds of woods, groves, and orchards. They often pass from one pine forest to another in large flights during the winter*. They appear to like the society of the gold-crested wrens, which are always found in these flights, as also some crested tits, which serve as guides.

In the house it is pleasanter to allow them to range with the other birds than to keep them in a cage, yet there is some danger to their companions from their cruelty.

Food.—When wild, besides insects and their grubs, they feed on the seeds of different resinous trees; but as they are often deprived of this food in winter from the trees being loaded with snow and hoar frost, nature has given them the instinct to provide against this emergency: they hide a great quantity of these seeds in fissures, and under the large scales of the bark of pine trees, to which store they have recourse when in want.

The instinct just alluded to is manifested also in the house, even when they have abundance of all kinds of food; where they are observed to rob the other birds of seeds and bits of nuts, and run and hide them immediately in any crevices they may find, often visiting these stolen stores afterwards to see if they are safe. The blue tit and the oxeye are also accustomed to carry part of their food into a corner, but they do not hide with so much care, or from the same cause, as the cole tit. These birds are commonly fed on the universal paste, but they are accustomed to it with difficulty.

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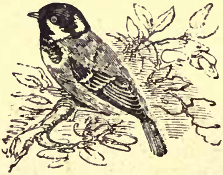
* It is not uncommon in Britain, such as near London, &c.—Translator.

Breeding.—This species generally places its nest either in some hole deserted by a mole or mouse, or under the overhanging edges of some deep wheel-rut in an old disused road, rarely in holes of trees or walls. The nest is composed of a layer of moss covered over with the fur of the hare, roe-buck, and stag. There are two broods in the year, each of six or eight white eggs, prettily speckled with pale red. The plumage of the young differs from that of the old only in having the black duller and less glossy.

Diseases.—Decline is the most common disorder of these birds, and it is sometimes prevented by giving them fresh ants' eggs, particularly when moulting. I kept a cole tit six years, and it then died of old age, having first become blind, and been often attacked with vertigo or giddiness.

Mode of Taking.—Less timid and distrustful than the oxeye, this species may be caught with greater ease. A limed twig fastened to a pole is often sufficient, with which you approach the tree on which the bird is, and, touching it with the twig, it becomes your prisoner. Its call is "*tzip teune.*" Like all the tits, it is delicate, and, in the house, often dies soon before being accustomed to the common paste.

Attractive Qualities.—This is a very amusing little bird; bold, lively always in motion, hopping and fluttering about continually. Its song is only a clashing of harsh tones, relieved by a clear sonorous "*tzifi*," repeated twenty times in succession. It sometimes ends, however, with so reflective an air, that you would think it was going to give something very fine.



THE BLUE TIT, OR TOM TIT

Parus cæruleus, Linnæus; La Mésange bleue, Buffon; Der Blaumeise Bechstein.

This pretty bird is four inches and a half long, of which the tail measures two. The beak is three lines in length, and dusky, but whitish at the edges and tip; the iris is dark brown, the shanks are eight lines high, and lead blue; the front of the head and cheeks are white; a white line passing from the forehead above the eyes forms a border to the fine sky-blue of the top of the head; a black line crosses the eyes; the black of the throat becomes on the sides of the neck a dark blue band. which surrounds the head.

The female is rather smaller than the male, the streaks about the head not being so clearly defined, while the blue has the appearance of being tinged with ash grey. The line down the under part of the body is scarcely observable.

Habitation.—These birds, in their wild state, frequent woods, particularly those of beech and oak. During autumn and winter they wander from one place to another, and are often seen in considerable numbers in our orchards.

In the house they may be kept in a cage like the oxeye; but it is preferable to let them hop and flutter about at pleasure, as their plumage is then seen to the greatest advantage. They are as mischievous and quarrelsome as the oxeye, and pursue the other birds in the same manner, even killing them when they are strong enough.

Food.—When wild they feed on insects and their grubs, and in autumn on berries *.

In the house they should be given the same food as the oxeye, accustoming them to it at first by mixing bruised hemp-seed with it. They like to wash themselves.

Breeding.—The nest, placed at the top of a tree in an old hollow branch, is built of moss, hair, and feathers. This species lays from eight to ten reddish white eggs, speckled and spotted with brown. The plumage of the young birds differs from that of the older ones, only in being less bright and glossy.

Diseases.—Most of these birds that are caught in winter, are attacked with vertigo, or giddiness, after being in the house a few days, fall to the right and left, and being unable to find their food, soon die.

Mode of Taking.—They may be caught in the same way as the oxeye.

Attractive Qualities.—The blue tit is easily tamed, and lives two or three years. Its beauty and activity are more attractive than its song, which is merely an indistinct warbling, composed of a few strains, amongst which some higher notes are occasionally introduced.

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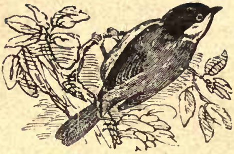
* They are fond of picking bones.—Translator.



THE MARSH TIT.

Parus palustris, **Linnæus**; La Mésange des marais, **Buffon**; Der Sumpfmeise, **Bechstein.**

The length of this bird is four inches and a half, of which the tail measures nearly two; the beak is four lines in length, and black; the shanks are five lines high, and lead blue; the upper part of the head, as far as the nape, is black; the temples and cheeks are white; the upper part of the body is brownish grey; the throat is black.

The female has less black on the throat than the male.

Habitation.—In their wild state, these birds, during the summer, frequent groves and orchards; in winter, they assemble in flocks, and when they move from place to place, always fly in a line one behind the other *.

In the house they should be allowed to flutter and hop about freely; they are very delicate, and require a great deal of care at first.

Food.—When wild, they feed on insects, seeds, and elderberries, according to the season.

In the house they eat the same things as other tits; but at first, ants' eggs and elderberries must be added. The seeds of the sunflower (*Helianthus major*) have succeeded best with me, and preserved them in health longest. They will also eat hemp-seed and oats.

Breeding.—They lay ten or twelve rusty white eggs, spotted with reddish yellow, in a hole of a tree, on a bed of moss, hair, and feathers.

Mode of Taking.—In winter they will easily enter a trap baited with nut kernels or oats. A surer method is, to lay limed twigs on a sunflower plant, the seeds of which are ripe. If these tits do not enter the garden, a plant must be carried to a place much frequented by them. When once these birds have tasted these seeds, they appear quite contented in the house. It is only necessary to supply them freely; they will seize them eagerly directly after being taken.

Attractive Qualities.—Their pretty actions please, and their song is sweet. They relieve it occasionally by a lively strain, "*diar*, *diar*, *hitzi ailtz*, *ailtz!*" which is their call in the pairing season.

I was never able to keep one in the house beyond two or three years.

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* They are not uncommon in Britain, such as about London, &c.—Translator.

THE CRESTED TIT.

Parus cristatus, LINNÆUS ; La Mésange huppée, BUFFON ; Die Haubenmeise. BECHSTEIN.

THIS bird is four inches and a half in length, of which the tail measures one and one third. The beak is four lines, and black ; the shanks are seven lines high, and lead blue ; the head is adorned with a crest, composed of feathers nearly an inch long, black tipped with white, which the bird can erect at pleasure in a conical form.

HABITATION.—When wild these birds frequent all the pine and fir woods in Thuringia, but are not so numerous as the other species *. They fly about low bushes, and therefore delight in places where juniper bushes abound.

In the house they require the same treatment as the blue tit, and even greater attention ; they can rarely be tamed when taken full grown †.

FOOD.—In a wild state it feeds in the same manner as the cole tit.

In the house it must be first fed on ants' eggs, flies, and meal-worms. It will afterwards eat nuts and hemp-seed, like the other tits, but it seems to require insects occasionally.

BREEDING.—The nest is formed like that of the cole tit, and placed in the hole of a tree, amongst some stones, or in large forsaken nests. The brood consists of from six to ten snow-white eggs, spotted with bright red. The young must be reared on meal-worms cut small and ants' eggs.

MODE OF TAKING.—This is the same which is adopted for catching the cole tits. Its call is "*gærrky*."

ATTRACTIVE QUALITIES.—Its song is not striking, but its form and habits are very pleasing.

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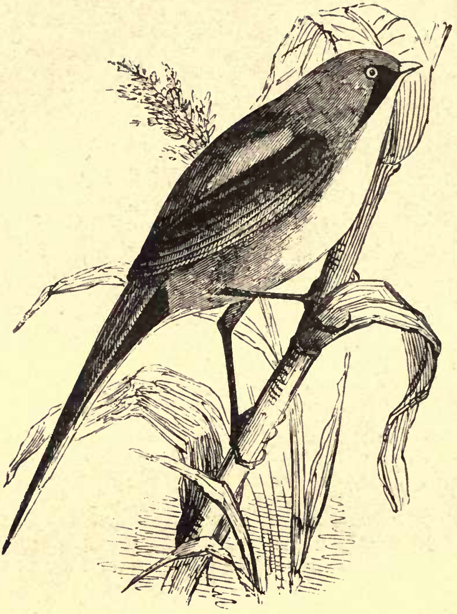
* It is found, but rarely, in the fir woods in the north of Scotland.—TRANSLATOR.

† I have, however, seen one old crested tit that was tamed as easily as any other bird. After passing the winter in a cage it refused its liberty in the spring. It was then placed in the garden near the house, where it remained till evening, having hopped about all day, uttering restless anxious cries. Its mistress, fearing some accident befalling it during the night, held the cage towards it, into which it instantly jumped with pleasure. Since then it has been allowed to range three adjoining rooms. It is always lively, coming when its mistress calls, and perching on her finger, and seeking in her half-closed hand the flies she may have there. It made a nest in a window-curtain, into which it would glide secretly in the evening, but would never go whilst any eyes were turned on that side, and seized a favourable moment so quickly, that for some time no one knew where it retired ; when it was discovered, the curtains were never touched.—TRANSLATOR.



THE BEARDED TIT, OR REED BIRD.

Parus biarmicus, LINNÆUS; La Mésange barbue, BUFFON; Die Bartmeise, BECHSTEIN.

THIS singular species is somewhat in shape like the oxeye. It is six inches and a half in length, and measures ten and a quarter across the expanded wings; the tail is two and three quarters. The beak is four lines long, a little bent at the point, and is orange during life, but becomes pale yellow after death; it is surrounded at the base with black hairs. The iris is yellow; the shanks are one inch high, and black; the head is pale ash grey; a tuft of black feathers, which are placed under the eyes and terminate in a point, is no very slight imitation of a moustache. The tail is wedge-shaped, inclining to orange; the outer feathers are dark at the base and whitish at the tip; the third is tipped with white.

The female is without the beard, or moustache *; the top of the head is rust red, spotted with black; the vent is of the same colour as the belly.

Habitation.—In a wild state these birds are found where there are lakes, large ponds, and extensive marshes full of reeds and aquatic plants; they rarely show themselves in summer, keeping in pairs amongst the tufted reeds; but they are seen in winter, when food failing them in these retreats, they fly about in families, perching on the trees and bushes †.

In the house they must be kept in a large cage to allow them plenty of exercise, unless permitted to range the room, which is still better.

Food.—When wild this bird feeds principally on aquatic insects and the seeds of the common reed (*Arundo phragmitis*).

In the house they are generally first fed on poppy-seed, ants' eggs, and meal-worms, and afterwards on bruised hemp-seed and the food common for the other tits. It is best to rear them from the nest, as it is very difficult to preserve those taken when full grown.

Breeding.—The knowledge on this head is very limited: the nest, placed in the interwoven stems of the reeds, is in the shape of a purse, and composed of dried grass and the down of several plants. In this the female lays four or five speckled eggs, with a pale red ground. The young birds should be taken from the nest when they are ready to fly, and fed on ants' eggs and meal-worms cut small.

Mode of Taking.—There is much difficulty in this. Fishermen who know the places frequented by this species place limed twigs on the reeds, and try gently to drive them towards one side, and sometimes catch a few ‡.

Attractive Qualities.—In this bird are united beautiful plumage, a graceful shape, and sprightliness. Its song resembles that of the blue tit, but its call is very different. It is a pity it is so difficult to obtain. Buffon says that all of this species that are found in England sprang from a pair the Countess of Albemarle suffered to escape; but most likely they had not been seen before from want of attention.

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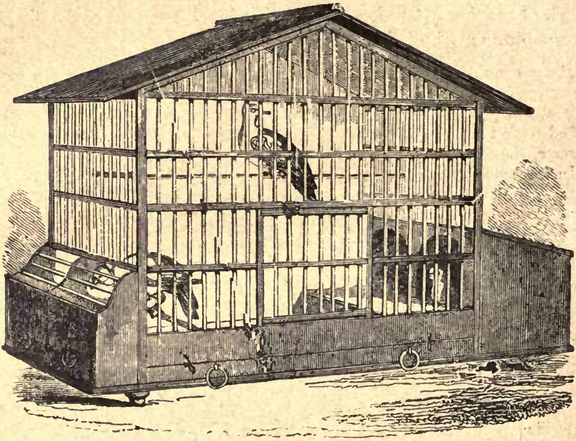
* This is not quite correct, the female having small moustaches of a light colour. —Translator.

† They abound in the fens of Lincolnshire, on the Thames below Greenwich, &c —Translator.

‡ Great numbers are brought from Holland to London, and sell for about five shillings a pair.—Translator.



CATO'S DOVE'S BREEDING CAGE.

DOVES.

CHARACTERISTICS.—The beak is slender, straight, rather bent at the point, swelled, and covered with a fleshy membrane at the base; the shanks are short; the toes are divided to their origin. Doves feed uniformly on grain, though some wild species also eat myrtle berries.

These birds are faithful to their mates, and produce only two young ones at each brood, which they feed on grain already softened in their own crops *. They are generally ranged amongst the passerine birds, or among poultry, but I think it best to make them a distinct order, since they have many distinguishing characteristics. The species I shall mention are indigenous, and easily tamed at any age.

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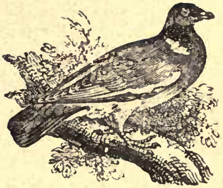
* This is a mistake: the food given to the young is a sort of thick milky secretion from the stomach of the parent birds, both male and female.—TRANSLATOR.



THE RING DOVE, OR CUSHAT.

Columba Palumbus, **LINNÆUS**; Le Pigeon Ramier, **BUFFON**; Die Ringeltaube, **BECHSTEIN.**

THIS is the largest of the European wild pigeons, being in length seventeen inches and a half. Some naturalists suppose this to be the parent stock of our large domestic pigeons; but it cannot be domesticated so easily as the stock dove, and never mixes with the common pigeons in the fields. It does not, moreover, retire into hollows, like these, but lives and builds in open and exposed places. The beak is reddish white; the iris is pale yellow; the shanks are reddish; the head and throat are dark ash grey; the front of the neck and the breast are purplish ash grey; the sides and back of the neck are fine iridescent purple; an almost crescent-shaped white streak adorns the sides of the neck towards the base, without quite surrounding it; the belly, the vent, and the thighs, are very pale grey; the sides are light ash grey; the upper part of the back, the scapulars, and the lesser wing-coverts, are light brownish ash grey; the coverts of the primary quill-feathers are black; the remaining greater coverts are pale ash grey; the tail is dark ash grey, deepening into black at the extremity.

In the female the streaks on the sides of the neck are not so wide as in the male; her breast is paler, and all the wing-coverts are an obscure grey.

HABITATION.—This species, found in Europe and Asia within the temperate zone, is very common in the woods of Germany and Britain: it quits us the beginning of October, in small flights, and does not return till the middle of March, and sometimes later, always some weeks after the stock dove. During harvest it frequents small groves and detached thickets, to be nearer the corn fields.

Food.—It feeds on all kinds of corn and leguminous seeds, myrtle berries, with the seeds of pines and firs. When a ring dove is caught it must be first fed on wheat, and other species of corn should by degrees be mixed with it, but not oats. It will only live a few years in the house.

Breeding.—This species builds in trees, and forms its nest of dried branches, but so carelessly that a rather high wind will often blow it down. The female has two broods in the year, and lays two large white eggs each time. It succeeds very well to place these eggs under a domestic pigeon, and if care is taken to prevent the young birds from migrating in autumn they will afterwards remain in the pigeon house, going out and returning like the other pigeons that inhabit it; but I have never observed that they pair with them; I have sometimes seen the ring dove tread the domestic pigeon, but as yet nothing has resulted from it; future experiments may perhaps decide this point.

Mode of Taking.—This is the same as with the stock dove. Ring doves taken when old rarely eat, and die of hunger if they are not crammed, like young pigeons.

Attractive Qualities.—Besides being a fine bird, the male coos in a very pleasing and sonorous manner, moving all the time around his mate, now before, then behind, hopping close to her side, and turning his head in every direction. It may be rendered very tame.

THE TURTLE DOVE.

Columba Turtur, Linnæus; La Tourterelle, Buffon; Die Turteltaube, Bechstein.

This pretty species is ten or eleven inches in length. The beak is slender, and pale blue; the iris is reddish yellow; the naked circle round the eyes is blush red; the legs and feet are reddish purple; the forehead is whitish; the top of the head and upper part of the neck are pale blue; from this to the tail the blue is more dingy; on each side of the neck is a black spot striped with three or four crescent-shaped white lines, which has a pretty effect

Habitation.—In their wild state these birds are found throughout the temperate parts of Europe and Asia, and also in many of the South Sea Islands. They always prefer woods, but never go far into those on great chains of mountains; they also frequent detached thickets, and even orchards when near forests. Being more delicate than the two preceding species, they do not arrive in our woods till the end of April or beginning of May, and quit us in September. They are often seen in great numbers in the forests of Thuringia when the pine seed has ripened well. In 1788 a prodigious number were seen; they have never since been so numerous there *.

In the house we keep them within a grated partition near the stove, where they can range freely. Young ones reared by a domestic pigeon are easily accustomed to the dovecot, but as they are very sensible to cold it is necessary to warm the place they are in during winter. These birds multiply fast, either paired amongst themselves or with the collared turtle dove.

Food.—The seeds of the pine seem to be their favourite food here, but they do not confine themselves to it; they eat peas, vetches, millet, hempseed, rye, and wheat. In the house they may be fed on bread and any grain at hand: they are easily preserved.

Breeding.—When wild, their nest, negligently formed of dried sticks, is tolerably secure when placed in a pine, but is often blown down when in a beech. The female lays two white eggs.

In the house the turtle dove is given a small straw basket, in which it builds, for, whether reared from the nest, or taken when full grown, it pairs without difficulty, and produces young ones. It will also pair with the collared turtle.

The cooing of the male is peculiar; he utters a deep prolonged sound, then bends his head and stops. The young birds are grey on the upper part of the body, and spotted with bluish black on the wings. Those sprung from a collared and a common turtle dove are more or less like either; generally they are reddish grey on the head, neck, and breast, the back and wing-coverts, with red appearing through the grey; the belly, the secondary quill-feathers, and the end of the tail, are white, and the primaries greyish brown. These birds are fruitful, and produce others; what is curious is that they are larger than the parent birds, and have a peculiar note. This is certainly also the case with other mule birds, as I have often observed.

Mode of Taking.—This is the same as with the two preceding species; snares placed where salt is strewed for deer are sufficient.

Attractive Qualities.—The inhabitants of our forest villages are very fond of having this turtle dove in their stove apartments, less on account of its agreeable qualities than from the persuasion that it cures their colds and rheumatisms. It is certainly true that this bird is generally ill during the illness of its masters †. It will, however, live six or eight years in the house.

THE COLLARED TURTLE.

Columba risoria, **Linnæus**, La Tourterelle à collier, **Buffon**; Die Lachtaube, **Bechstein.**

This bird is twelve inches in length; the beak is reddish white at the base, and dusky on the remaining part; the iris is golden yellow; the shanks are red; the upper part of the body is reddish white, the under part is pure white; the back of the neck is adorned with a black crescent, the points of which turn forward, and the lower part is edged with white; the shafts of the quill and tail feathers are dusky.

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* In England they are not uncommon in the woods.—Translator.

† The close and mephitic air of these rooms, which are kept warmer whilst a person is ill, may well produce this apparent sympathy.—Translator.

The female is whiter than the male.

HABITATION.—This species is a native of India and China, from which it has been brought to Europe. It is very common among our peasants, who fancy it has the power of curing their colds and rheumatisms *. They assign these poor birds some grated place near the stove, sometimes under a bench; if they are allowed to range, their wings must be clipped, to prevent their flying against the windows, and breaking them. They will generally run under the stove, as they are fond of warmth. They may be accustomed to the dovecot, but their showy plumage often occasions them to fall a prey to carnivorous birds. It is also necessary either to warm the dovecot, or remove them to a heated room during the winter.

FOOD.—They prefer wheat, and this should be their common food; they will also eat millet, linseed, poppy, and rape-seed, and even bread. The peasants give them the siftings of their corn.

BREEDING.—A piece of fur, or soft stuff, or still better, a little basket, serves as the foundation for their nests. To this they merely add a little straw, on which they lay two white eggs. They sit on these a fortnight, but rarely hatch more than one, either from the egg being unfruitful, or from the carelessness of the parent birds. It is therefore rare to see them rear six young ones in the year. These resemble the old ones, and the sex is known by the absence or presence of the reddish colour.

DISEASES.—Besides decline, they are subject to all the diseases that attack the persons shut up in the same room; small-pox, when the children have it; swollen legs, when any one is attacked with this complaint; and tumours in the feet, when these are prevalent. Thus we see they partake of the diseases of their masters, but without curing them, which is contrary to the ridiculous persuasion of the ignorant peasant. Yet with all these evils they will live seven years.

ATTRACTIVE QUALITIES.—These birds are very neat and gentle. Their cooing resembles laughter; but, besides this, the male has other tones still more tender, to invite his mate to come to the nest, and he passes the night close to her side. When he coos he does not turn like the domestic pigeon, but hops forward a little, then stops, bends his head to the ground, and swells his crop.

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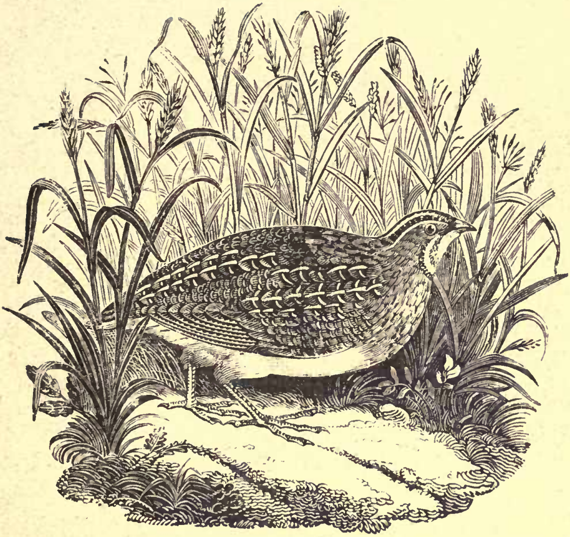
* An erroneous opinion, which displays more egotism than humanity; yet do people generally act with more equity and disinterestedness?



THE QUAIL.

POULTRY

Characteristics.—These birds are characterised by the beak being raised, and the upper mandible being arched, so that the edges of it go beyond those of the under mandible. The nostrils are covered with a convex cartilaginous membrane; the tail is composed of more than twelve feathers; the toes are connected as far as the first joint. Most of the species feed on grain, which is softened in their crops. I only know of six species that can be tamed in the house.

THE COMMON PARTRIDGE.

Tetrao Perdrix, LINNÆUS; La Perdrix grise, BUFFON; Das gemeine Rebhuhn, BECHSTEIN.

THIS well known bird, which is very fleshy, and has but few feathers, measures twelve inches and a half. Its beak is bluish, the feet brownish blush red; under each eye is a naked skin of a bright scarlet colour; the general colour of the plumage is brown and ash grey, mixed with black; the forehead, a streak above the eyes, and the throat, are fine chestnut brown; the fore part of the neck and the breast are ash grey, with very fine black lines; below the breast is a deep chestnut brown streak in the shape of a horse shoe, which is not found in the female, or at least not so large nor so clearly defined; the quill-feathers are dusky, with cross bands of rust red; the tail-feathers are rust brown.

HABITATION.—The common partridge is found throughout Europe, in fields and adjoining woods: when in the open country, thickets and bushes serve as a retreat during the night. In wide plains, where the frosts are severe, and the snow so deep that the game is in danger of perishing, it is customary, in winter, to catch in a net as many as possible of these birds, and keep them in a warmed room with a high ceiling. If such a room cannot be had, the top of the room and windows should be hung with cloth, to prevent the frightened birds from injuring themselves.

FOOD.—In the house, when permitted to range, partridges may be fed on barley and wheat. They will also eat bread, the common universal paste, cabbage, beet, and lettuce; for they like green vegetables, and these are almost indispensable to their health. In a state of liberty, they generally feed in winter on the tops of grass and young springing seeds. In the summer, they eat clover and other green plants, as well as all kinds of grain. They often roll in moist sand, which they should be allowed to do in the house.

BREEDING.—The best way to domesticate the partridge, is to rear it young, in which case it becomes extremely tame, and its habits are very pleasing. These young birds must be fed at first on ants' eggs and hens' eggs boiled hard and chopped up with salad; afterwards they will eat barley and other dry food. The covey often consists of twenty young ones, which follow the mother as soon as they are hatched, and often fall in the way of mowers, shepherds, and huntsmen. I am persuaded that it would not be difficult to render these birds quite domestic, if the eggs were hatched by our barn-door fowls, in an open, yet enclosed place, clipping the wings of the young ones, allowing them to range, during the summer, in a garden surrounded with walls, and giving them plenty of food. Supposing that this plan did not quite succeed the first summer, one would have at least half-tamed birds, which, by following the same plan, would gradually become more and more accustomed to domestic food, the society of man, and would certainly at last breed in the house, like our common fowls.

THE COMMON QUAIL.

Tetrao coturnix, LINNÆUS; La Caille, BUFFON; Die Wachtel, BECHSTEIN.

THIS species is the most common of wild poultry kept in the house. It is rather more than seven inches in length. The beak is short and horn-coloured, dusky in summer, and ash grey in winter, like the partridge's and common fowl's; the iris is olive brown; the feet pale bluish red; on the upper part of the body are dusky and rust-red spots, with some small white streaks; the throat is dusky, surrounded with two chestnut brown bands; the front of the neck and the breast are pale rust red, with some longitudinal dark streaks; the belly is dusky white; the thighs are reddish grey; the quill-feathers are dark grey, crossed by many rust red lines; the tail is short, dark brown, with pale rust red streaks across it.

The female differs sensibly; her throat is white, and her breast, paler than that of the male, is spotted with black like the thrush's.

HABITATION.—When wild the quail is found throughout the old world. Unlike the other species of poultry, it is a bird of passage, arriving in Europe in May, and departing the end of September. It keeps continually in corn fields, preferring those of wheat.

In the house, if allowed to range, its gentleness, neatness, and peculiar motions, are seen to advantage; but it is often kept in a cage of the following make:—A small box two feet long, one foot deep, and four high, of any shape which is preferred; in this are left two or three openings, one for drinking at, the other to give light; besides this all is dark; the bottom is a drawer, which should be covered with sand, and have a seed drawer at one end; the top is of green cloth, for as the quail often springs up it would hurt itself were it of wood. This case should be suspended during the summer outside the window, for the quail sings much more when confined in this manner than if allowed to range the room, where there are many things to call off its attention from its song*.

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* Here is another instance, in which man, seeking his own pleasure at the expense of the well being of other creatures, deceives himself respecting the motives. The poor prisoner does not sing to amuse himself, or from contentment; its repeated cries call unceasingly for the mate from which it is separated; and though they have been vain throughout the day, he renews them on the morrow, no doubt, like man, supported by hope,—a hope, alas! which is never realised!—AUTHOR.

"When a male without the female is allowed to run about the room, it is always necessary to shut it up in June (the pairing season), or else its ardent feelings tempt it to attack all the other birds, particularly those with a dark plumage, somewhat resembling its own. Larks, for example, it will follow, and pluck out their feathers till they are nearly bare.

FOOD.—In a wild state the quail feeds on wheat and other corn, rape-seed, millet, hemp-seed, and the like. It also eats green vegetables, as well as insects, and particularly ants' eggs.

In the house it is fed on the same food, adding bread, barley meal mixed with milk, the universal paste, and occasionally salad or cabbage chopped up small, and, that it may want nothing to keep it in health, plenty of river sand for it to roll in and to peck up grains, which assist its digestion; but this sand must be damp, for if dry it will not touch it. It drinks a great deal, and the water, contrary to the opinion of some persons, should be clear, never turbid. It moults twice in the year, once in autumn, and again in spring; it then requires river sand, and greater attention than at other times.

BREEDING.—The quail breeds very late, never before July. Its nest, if it can be called so, is a hole scratched in the earth, in which it lays from ten to fourteen bluish-white eggs, with large brown spots. These are hatched after three weeks' incubation. The young ones, all hairy, follow the mother the moment they leave the shell. Their feathers grow quickly, for in the autumn they are able to depart with her to the southern countries. The males are so ardent, that if one is placed in a room with a female, he will pursue her immediately with extraordinary eagerness, tearing off her feathers if she resists in the least; he is less violent if he has been in the same room with her during the year. The female, in this case, lays a great many eggs, but rarely sits on them; yet if young ones are brought her from the fields, she eagerly receives them under her wings, and becomes a very affectionate mother to them. The young must be fed on eggs boiled hard and cut small, but the best way is to take the mother with the covey, which may be done with a net. She watches over them attentively, and they are more easily reared. During the first year one would think that all in the covey were females, the males resemble them so much, particularly before the brown shows itself on the throat.

MODE OF TAKING.—There are several different methods of taking quails, but I shall only mention the commonest and easiest. The male birds are generally caught in a net, called a quail-net, by means of a call which imitates the cry of the female in the breeding season; it is the way adopted by bird-catchers in the spring, when they wish to take a male that sings in a superior manner, that is, which repeats a dozen times following the syllables "*pieveroie.*" If the male has not yet met with a mate, and if he has not been rendered suspicious by some unskilful bird-catcher, he will run eagerly into the snare. The most important thing is to have a good call they may be had cheap of turners at Nuremberg, who make them of leather, with a pipe turned from the bone of a cat or hare, or the leg of a stork; but they may easily be made by any body. The first thing necessary is a piece of calf-skin, one foot in length, and four inches in breadth. the sides must be sewed together within two inches of the end, and the bottom filled with a piece of woo d an inch and a half in length, and rings composed of thick leather, the diameter of the interior opening not exceeding an inch and a half, are pushed into the sewed cylinder, and kept about a quarter of an inch apart; the whole may afterwards be pressed close together, making the rings touch each other; then a tube made of the bone of a goose or hare, and filled at the end like a common whistle, is fastened to the part of the cylinder left unsewed; the interior is then stopped with wax near the notch on the side of the leather, and a hole pierced through it with a knitting-needle; the upper part of the tube must also be stopped with wax, and lastly, the lower part, which is thus become a kind of whistle, is very firmly tied to the unsewn part of the cylinder. When the call is to be used, the lower end must be held firmly in one hand, and the leather cylinder worked up and down with the other, making the rings approach and separate, which produces the notes of the female, "*peuk, peuk, pupu.*"

As soon as the male quail is heard that you wish to procure, you must advance softly to within fifty paces of his station, and place the trap amongst the wheat in such a position as will suffer it to fall level with the ground, to prevent the bird's passing under and escaping. Then retire a few steps back, when the quail will soon utter its song, to which reply with two or three notes, that when the quail is silent he may only hear one or two, from the call exactly resembling the cry of the female. If this is not done with care, the bird will suspect treachery, and will either retire or remain silent, and never after fall into such a snare; but if skilfully done, it is surprising to see how the bird proceeds directly to the call: if by chance he miss the trap, he will go so near as to be within reach of the hand; in this case it is best to retire softly to the other side of the trap and repeat the call, which will again attract it. There are some quails that know how to avoid the net, particularly if placed in too open and exposed a place. In this case it is safest to turn it in a corner at both ends, and thus when it tries to turn it becomes entangled.

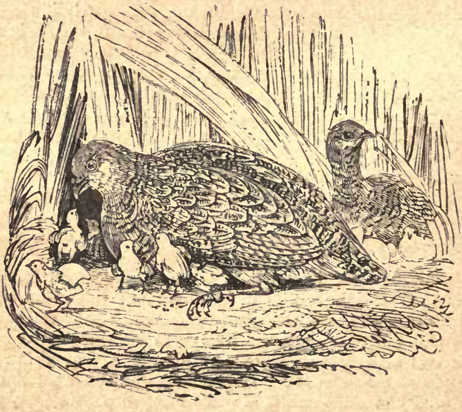
It is proper to notice, that in damp weather, or when it rains, the quail does not run, but flies immediately towards the call. It does this also in dewy mornings and evenings; dry days should therefore be chosen for this chase. In the pairing season, two, three, or even four quails may be taken at the same place.

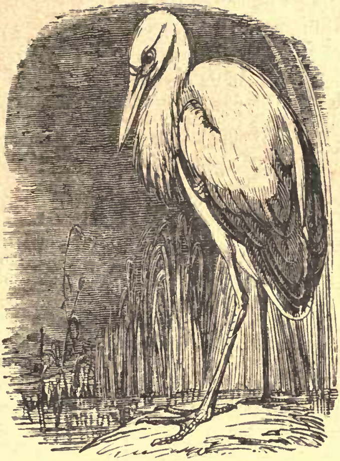
If no male is heard in the field, the call of the female must be well imitated on a larger and more powerful bird-call, and, if any males are within hearing, they will not fail to answer; the person must then advance quickly, placing the net so as to stop their road, and repeat the call.

When a female is to be caught, it is best to employ a common net, such as is used to take quails in autumn; but this chase should be deferred till towards the end of harvest, when most of the corn is cut, and only a few pieces left standing, which serve to harbour numbers of these birds. Several nets are used at once, as many as six or eight; some of them are placed across the field of corn, and the others parallel to them at the extremity of the same field: this being done, the party go to the opposite side and begin to drive the quails into the nets in the middle of the field by means of a packthread stretched across the corn, having little bells suspended to it by threads, so as almost to touch the ground, two persons holding it, and as they advance shaking it from time to time. As soon as the prisoners are secured, the march is continued towards the nets at the end of the field; and in this manner great numbers of quails, both male and female, are procured either for the house or for the table.

Attractive Qualities.—Besides beauty of form and plumage, the song of this bird is no slight recommendation to the amateur. In the breeding season, that of the male commences by repeating softly, tones resembling "*verra, verra*," followed by the word "*pieveroie*," uttered in a bold tone, with the neck raised, the eyes shut, and the head inclined on one side. Those that repeat the last syllables ten or twelve times consecutively, are the most esteemed. That of the female only consists of "*verra, verra*," "*pupu, pupu*," the two last syllables being those by which the male and the female attract each other's attention; when alarmed or angry their cry resembles "*guillah!*" but at other times it is only a murmur, resembling the purring of a cat.

The quail never sings when left to run about in a light room, except during the night, but continually when in a darkened cage. Those reared from the nest begin to sing the end of December, and continue till September; whilst those taken full grown rarely commence till the beginning of May, and cease in August.





THE STORK.

WADING BIRDS.

The birds of this order are more or less bare above the knees; their legs are so long, that they have the appearance of standing on stilts. They may be tamed at any age, but this is best done when they are young. I shall only give here the following species.

THE WHITE STORK.

Ciconia alba, Linnæus; La Cicogne blanche, Buffon; Der Weisse Storch, Bechstein.

The stork may be considered as half domestic, since it constantly builds on the tops of houses, on churches or towers in the midst of villages, and even towns*. Its beak is long and powerful, of a blood red colour, as are its legs and feet. It has a naked black ring round its eyes; the wings are black; the rest of the plumage white.

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* It is now uncommon in Britain.—Translator

Observations.—It is a bird of passage, which quits Europe the end of September, and returns in April. It feeds on fish, amphibious animals, field-mice, moles, and even weasels, which it catches coming out of their holes. It also eats insects, especially bees, which it catches by the beakfull on flowers. Its nest is only a heap of dry sticks woven together, and it occupies the same nest every year, after repairing it a little. I have been assured, that some nests have lasted a hundred years; and the circumference often becomes covered with sparrows and swallows' nests. The male and female never separate, and are a true model of conjugal fidelity. If the young ones are taken from the nest, and fed on frogs and meat, they may be rendered so tame that they will go a league from the house, and return again regularly. At the time of their flight, in September, the wings of those that are to be kept through the winter should be clipped, and they should be kept in a temperate place, as their feet are very sensible to cold. They become so familiar that they will enter the room during meals, to be fed on meat from the table. A clapping with their beak expresses either anger or affection. It is very pleasing to see a tame stork circling round the house, and descending insensibly in a long spiral line till it reaches the ground.

THE BLACK STORK.

Ardea nigra, Linnæus; Der schwarze Storch, Bechstein.

This species is nearly as large as the white stork, and is of the same form, but its limbs are weaker and more delicate. Its colour is a glossy brownish black, with the breast and belly white. It frequents woods in the neighbourhood of marshes, lakes, and large ponds, and makes its nest on the trees. Its habits and manner of feeding are similar to those of the white stork. In rearing the young ones, they may be accustomed to remain in the house, and will soon become familiar.

THE WOODCOCK.

Scolopax rusticola, Linnæus; La Bécasse, Buffon; Die Waldschnepfe, Bechstein.

The woodcock is found in every part of Europe where there are forests. The beak is three or four inches in length, straight, and reddish at the base; the back of the head is crossed with dusky bands; the upper part of the body and wings are rust brown, streaked with grey and black; the breast and belly are dusky white, with dark brown lines.

Observations.—The woodcock builds its nest on the ground in mountainous districts; lays three or four dusky pale yellow eggs, and feeds on worms, snails, and the grubs of insects, which it seeks in meadows, marshes, and fields. In October it quits the high lands for more temperate parts; this migration is called its *passage*, and as these birds constantly follow the same route, this is the time when fowlers, scattered in its destined path, prepare for a chase, either with guns or large nets made for the purpose, and await the moment when these birds quit the meadows for the woods, or the woods for the meadows. The flight of woodcocks is slow and awkward, but they are very fine game, the flesh being wholesome and of an excellent flavour; they are generally cooked without taking out the intestines.

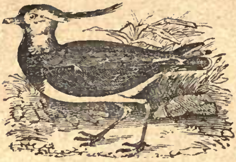
In the house, by beginning with insects and ants' eggs, the woodcock may be accustomed by degrees to the universal paste. Twenty years ago I saw, in an aviary at Carlsruhe, a tame woodcock that would come from his cage and show himself to strangers; it was a male, and appeared very willing to pair, if it could have found a mate.

THE COMMON SNIPE.

Scolopax Gallinago, Linnæus; La Bécassine, Buffon; Die Heerschnepfe, Bechstein.

This Snipe is nearly the size of the quail, and inhabits the northern countries of Europe, Asia, and America, migrating in autumn to more temperate parts. Its rough beak is black in the front; its feet are brown; the head is divided longitudinally by two reddish brown lines; the back is dark brown, with streaks across; the throat is white; the neck is brown, speckled with brick red; the belly is white; the vent is striped with black; the quill-feathers are dark brown, tipped with white; the tail-feathers are black from the base, tipped with orange, and having two dark brown streaks.

Observations.—The snipe darts through the air at a great height, and descends like an arrow, continually uttering the cry "*maicherai.*" It is found in marshy places, abounding with bushes and brambles; in a hole in the ground, washed by the water, it lays four or five dusky olive-coloured eggs, streaked with brown. Its common food is worms, and the grubs of insects, but it will eat corn, and the tender roots of marsh plants. Every one knows that it is delicate eating; but many are ignorant that it may be tamed, and that it is then a very pleasing bird.



THE LAPWING.

Tringa Vanellus, Linnæus; Le Vanneu, Buffon; Der gemeine Kiebetz, Bechstein.

This bird is well known throughout Europe wherever there are water meadows. It is greenish on the back and wings; black on the breast; and has red feet, and a handsome crest.

Observations.—It feeds on all sorts of insects, small snails, worms, and even plants. The young ones are easily tamed. They are first fed on ants' eggs, and then gradually accustomed to bread, and even bran mixed with milk. The eggs may be placed under pigeons, but care is necessary when they are hatched, as they run the moment they leave the shell. The old birds may be kept in the garden if the wings are clipped, where they destroy the insects and worms; but they must be brought into the house in the winter, and fed at first on bullocks' heart cut in the form of worms, then with less care, till by degrees they become accustomed to other meat, and even to bread. As these birds are much esteemed game, snares are laid for them in places they frequent in large flocks. They are either taken in nets, throwing worms as baits, or with nooses made of horse hair, and set in the paths they trace in the rushes, or, which is cruel and destructive, in the neighbourhood of their nests.

THE RUFF.

Tringa pugnax, Linnæus; Le Combattant, ou Paon de Mer, Buffon; Die Kampfhahn, Bechstein.

The ruff is about the size of the lapwing, and is found in the north of Europe, near lakes, ponds, and extensive marshes. It is almost the only wild bird whose plumage varies like our domesticated ones, ash-grey, brown, black, and white, being combined in a thousand different ways, so that it is rare to meet with two birds alike. The following are the characteristics of the species:—1st, a kind of ruff or collar, formed of long feathers hanging around the neck, which are raised when the bird is angry, and stand out on all sides; 2nd, the face red, and covered with pimples; the beak and feet also red.

The colours of the females are more uniform:—pale brown, the back streaked with black, the breast and belly white, and the neck plain without the ruff.

It feeds on insects, worms, and roots, and makes its nest in a tuft of grass or rushes. The females are tolerably good for the table, but the male must be fattened before it is eatable. The irritable and quarrelsome disposition of these birds is astonishing. When two males meet they are often so enraged with each other that a net may be passed over them without their perceiving it. If several are placed in the same cage, they will kill one another. The young ones may easily be reared; but it is extraordinary, that in the house, their inclination to fight abandons them; whilst most other birds, pacific in a state of freedom, are continually quarrelling and pecking one another when confined. It is customary in the duchy of Bremen to put these birds into enclosed gardens to destroy worms and other insects, but they retire into the house for the winter; and here the old ones still quarrel both for food and the place they wish to lie down in. They are fed on bread soaked in milk, and meat.

THE PURR.

Tringa Cinclus, Linnæus; L'Alouette de Mer, Buffon; Der Meerlerche, Bechstein

This is a marsh bird, about the size of the redwing, and is very common on the banks of rivers, lakes, and large ponds. When it rises in the air it cries continually "*tzi, tzi, tzi, tzi.*" Its beak is black, and its feet dark brownish green; the feathers on the upper part of the body are grey, glossy, and silky, with blackish bands notched on the sides, and bordered on the outer edge with rust red; a whitish streak passes above the eyes, whilst a narrow dark brown line crosses them; the under part of the body is pure white, but the breast is striped with dark brown; the quill-feathers are black, the anterior having a broad white streak on the inner web, the others having the same on the outer web; the greater coverts are tipped with white, which form two spots on the wings; the three middle feathers of the tail are grey brown with black bands; the others are white, with dark brown bands.

The female is rather larger, and her plumage is paler.

Observations.—It is easy to obtain this bird, which has many attractions for the amateur. It runs quickly, continually shaking the back part of its body, and repeating, particularly towards evening, its loud and tender call, "*hidutzt.*"

When wild it eats insects and worms, found near the water. In the house it will soon eat the universal paste, if a few meal-worms and ants' eggs are at first thrown amongst it. If there are other birds in the same room, the water vessel should be removed from the food, or another vessel devoted to it, for not being able to swallow what is not soft, it carries all its food to the water to soak, and thus renders it dirty. It catches insects very dexterously; it advances slowly like a cat, its head bent down, and then darts forward swiftly and slily. I admire their habits so much that I have one generally in my house. I have observed that all the species of snipes have the habit of turning over any stones they meet with, to look for insects under. It is very easy to take the purr as soon as the stakes, sticks, and other places where they most commonly alight, are known; it is only to put bird-lime on them and drive the birds gently towards the part. This and the corn crake are the only two marsh birds that should properly be reckoned among house-birds.

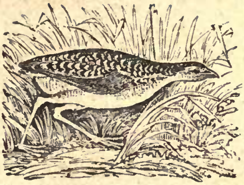
THE MOOR HEN.

Fulica cnloropus, Linnæus; La Poule d'Eau, Buffon; Die grünfüssiges Meehuhn, Bechstein.

The length of this species is ten or twelve inches. The beak is greenish at the tip, red towards the base; the naked spaces above the knees are of the same colour; the feet are olive green; the claws are very long; the head, the upper part of the neck, the body, and the wing-coverts are dark olive green; the anterior quill-feathers and the tail are dark brown; the breast and belly are ash-grey; the vent and edges of the wings are white.

In the female the beak is olive brown towards the base, instead of red.

Observations.—Though not web-footed, this species swims as well as those birds that are, and has this advantage over them, that it can rest on trees and bushes by the water-side, like land birds, and can also run when inclined. Its nest is placed among bushes that are in the water, or on reeds, and is built of water plants, especially reeds well interwoven; it is so firmly fastened, that if the water rises it floats, but is not carried away; the eggs are often surrounded with with water. It feeds on insects, seeds, and aquatic plants. It is easily tamed, particularly when taken young; it likes white bread soaked in milk. I often have these birds in my poultry-yard among my fowls; they go to a neighbouring pond, and regularly return after a short time. I never took any trouble to tame them; they always kept near the water, by the dunghill, seeking after insects and grubs



THE CORN CRAKE.

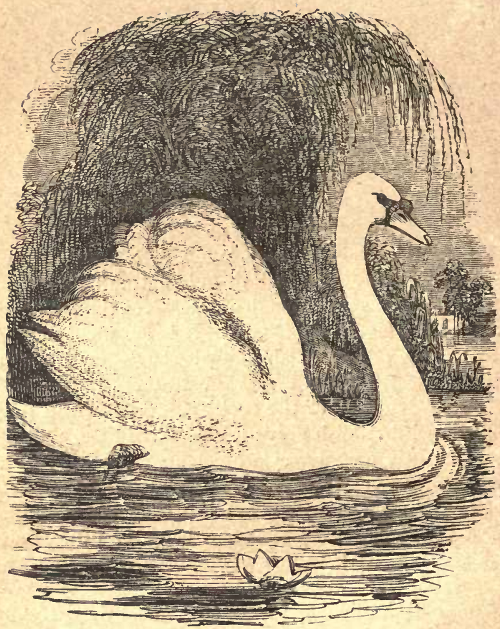
Rallus Crex, LINNÆUS; Le Rale de Cenet, ou Roi de Cailles, BUFFON; Der Wachtelkönig, BECHSTEIN.

THE corn crake being always found with quails in proportionate numbers, departing with them in autumn, and returning at the same time in spring, no doubt deserves the name Buffon has given it of King of the Quails. It is ten inches in length. The beak is flattish, greyish brown above, and bluish red beneath; the feet are lead grey; the feathers of the head, of the back of the neck, of the back, and even of the tail, are black, edged with reddish grey; which gives them the appearance of being streaked: a grey ash-coloured streak passes above the eyes, another below them; the wing-coverts and anterior quill-feathers are chestnut brown; the front of the neck and the breast are dusky ash-grey; the belly is white, but the sides and vent are dark brown, spotted with rusty brown and white.

The breast of the female is pale grey, and the streaks near her eyes greyish white.

OBSERVATIONS.—The male is often heard uttering his kind of croaking notes, "*arrp, schnarrp,*" in the meadows and fields, in the evening and at night; but is rarely seen to fly. It feeds on insects and grain, for which bread soaked in milk may be substituted, when it is in the house. The female lays from eight to twelve greenish grey eggs, streaked with pale brown, on the bare ground; the young ones, when hatched, are covered with a kind of black down, the feathers of varied colours do not appear for three weeks. The hen sits with so much constancy, that she will often perish by the sithe rather than quit her eggs. The young, like the young quails, run under the oat sheaves, and may easily be caught there by the hand.

The agility of these birds, and their pleasing habits, render them much admired in the house; they chirp very much like chickens. I confess I like very much to hear the "*arrp, schnarrp*" of the male in the evening near me.



THE SWAN.

WEB-FOOTED BIRDS.

The birds arranged in this order are also known, under the name of aquatic birds. They are distinguished by their feet, the toes being united by a broad membrane, which assists them in swimming. Several live uniformly on the water, others in companies on the water and on the land. There are many that may be tamed, but I shall only speak of those that are able to live without being on the water. The number is thus confined to six species, easily tamed at any age.

THE SWAN.

Anas Olor, **Linnæus**; Le gigne, **Buffon**; Der Schwan, **Bechstein.**

Instead of the common name of tame swan, I prefer that of mute swan, in order to distinguish this from the whistling, also called the wild swan, but improperly, for in Russia it is more common to have that tamed than the one under notice. This, however, is found wild throughout most parts of Europe, and in great numbers in Siberia. In Germany, when a person wishes to have one on a piece of water, and to keep it there constantly, he chooses some young ones, and breaks or cuts the first bone in the wing, to disable them from flying, and consequently prevent their departing in the autumn with their wild companions.

The swan is larger than a domestic goose, it is four feet and a half in length, on account of its long neck, which it bends in the form of an S when it is swimming; it measures seven feet and a quarter from tip to tip of the wings, and weighs from twenty-five to thirty pounds. The beak is dark red, having at the base a large black callous knob, and at the tip something resembling the head of a nail, black, and rather bent; a bare black triangular streak extends from the beak to the eyes; the feet are black the first year, lead grey the second, and reddish lead grey at last; the plumage is a snowy white.

Observations.—The story of its melodious death-song is now quite exploded; the organisation of its windpipe permits only a slight hiss, a dull murmur, and a gentle croaking. Song, properly so called, belongs exclusively to the whistling swan; a poet may have heard it once, and without observing the difference between the birds, have attributed it to the common swan. The later feeds on insects and aquatic plants; during the winter corn should be given it, and it must be kept in a temperate place. The female forms a large nest, of the stalks of rushes, reeds, and other plants, and lines it with feathers from her breast. She lays six or eight greenish white eggs, and sits on them five weeks. During this time, the male is always near her, driving away and pursuing all that would approach. He has such strength of wing, that a well-aimed blow of it would break a man's leg. The young ones are at first grey. It is said that swans will live a hundred years. Their utility as well as their beauty would merit more attention than is commonly paid to their education, which is easier than that of geese. Lithuania, Poland, and eastern Prussia, send several quintals every year to the fair of Frankfort upon Oder. Many tame swans are also collected on the Sprey, round Berlin, Spandau, and Potsdam; particularly in May, to rob them of their down. The skins with the down on them are prepared for pelisses powder puffs are also made of it.

THE SHELDRAKE.

Anas Tadorna, LINNÆUS; Le Tadorne, BUFFON; Der Bruntente, BECHSTEIN.

THIS species measures two feet from the tip of the beak to the extremity of the tail; the beak is smooth, flattish, and of a scarlet colour; a fleshy knob covers the upper base; the nostrils and nail at the end of the beak are black; the feet are bluish red; the head and upper part of the neck are duck green; the rest of the neck and belly are white; a wide orange brown band crosses the breast; the back, with the wing-coverts, is white; the scapulars are speckled with black; the first quill-feathers are black, the following violet, the middle ones rusty brown, and the last white; the speculum is green, reflecting a beautiful violet; the feathers of the tail are white, tipped with black.

OBSERVATIONS.—This species, found in the north of Europe and Asia, hollows out the sand by the sea-shore, or uses a forsaken rabbit's hole, or some cavity in a rock, to form its nest in. The beauty of its plumage has attracted the attention of amateurs, who tame it, and keep it in the poultry-yard; but it is not useful, its flesh having an unpleasant smell and flavour. It feeds with the other ducks, and becomes very familiar; it ever appears intelligent.

THE WILD GOOSE.

Anas anser ferus, LINNÆUS; L'Oie sauvage, BUFFON; Der wilde Gans, BECHSTEIN.

THIS is the parent stock of our domestic goose, and though smaller, it has a longer neck and larger wings. The upper part of the body is brownish grey, the under part is greyish white; the breast is clouded with rusty brown; the beak is orange and black; the feet are red. Several bomestic geese preserve this original plumage, even to the colours of the beak.

OBSERVATIONS.—This species frequents the shores of the North Sea during the summer; but in autumn departs in large flights disposed in a triangular form, and passes the winter in more southern countries, feeding on the blades of newly-sprung rye.

There are places in Thuringia where thousands of these birds collect in winter; they are very distrustful, placing sentinels as soon as they alight, which are so watchful, that it is very difficult to take or shoot them. If by chance the wing of one of these geese is shot, it may easily be kept in the yard with poultry; they are also taken in snares laid in places frequented by them during the night; they associate without difficulty with the domestic geese; but I only know one instance of a wild male pairing with a domesticated female.

THE SCAUP DUCK.

Anas marila, Linnæus; Le Milloninan, Buffon; Der Bergente, Bechstein.

This species, like the former, passes in autumn from the north to the south. They are caught and shot among the common wild ducks. The scaup duck may be tamed so far as to remain sociably among the domestic ones, will eat bread soaked in water, oats, and barley; in short, all that is given to common ducks. Its size also is similar, but it is black, with the belly and speculum white; five black transverse lines unite on the white ground of the upper part of the body; the wings and tail are dusky.

THE MALLARD.

Anas Boschas fera, Linnæus; Le Canoel sauvage, Buffon; Der wilde Ente Bechstein.

Our domestic ducks derive their origin from this species. It is spread throughout Europe on lakes, ponds, and rivers. Its length is two feet; its plumage ash grey, striped and waved transversely with white and brown; the head and neck are bright green, known by the name of duck-green; the breast is chestnut brown; the speculum violet green. The female is brown, like a lark.

Observations.—Like other birds of the same order, the wild ducks unite in large flights in the autumn, but divide into pairs in summer, and build their nests either near the water, among the reeds and bushes, in the trunks of old trees, or sometimes even in the depths of woods. They lay from twelve to sixteen eggs. In the forest districts of Thuringia, the young ones are met with in considerable numbers, being led to a neighbouring pond by the parent birds. If, after having mutilated or lamed the end of the wing, they are put into a pond with domestic ducks, they live and pair with them, become accustomed to their mode of life, follow them in winter into the house, without any decoy but being fed plentifully. Wild ducks are taken in nets, snares, and even with fishing-hooks.

By pairing a mallard with a female domestic duck, a very fine middle race is obtained, which remains domestic *.

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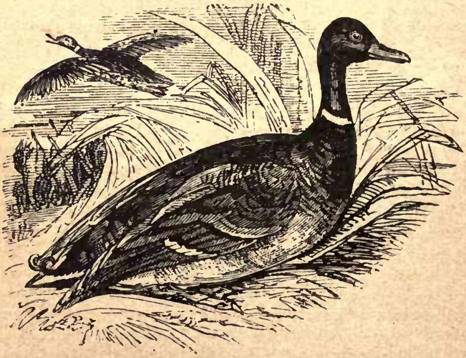
* A great many mallards are half domesticated on the water in St. James' Park, London, and other similar places in England.—Translator.

THE TARROCK.

Larus tridactylus, **Linnæus**; Larus rissa, cinereus et nævius, **Linnæus**, La Monette cendrée, **Buffon**; Der Wintermeeve, **Bechstein.**

These birds, about fourteen inches in length, change their plumage till they are four years old, which occasions great variety. In the old ones, the beak is yellowish green on the outside, and orange within; the feet are olive, and are without the back toe; the head, throat, neck, the rest of the upper part of the body, and the tail, are white. There is often a blackish streak behind the ear; the back and wing-coverts are pale grey or bluish; the quill-feathers are white; the primaries are tipped with black: those that have a dark grey crescent on the neck have not attained their fourth year; those streaked are young ones.

Observations.—The tarrocks remain in the north of Europe during summer, and go south in winter. In February, when snow comes after mild weather, great numbers are seen to stop on the ponds and rivers in Germany, where many perish; they may then be taken with nets and snares placed on the banks, after removing the snow. Though their proper food is fish and aquatic insects, they are contented, in the poultry-yard, with bread and other food; are easily tamed, and live equally well on the water or the land; in winter, they should be kept in a moderately warm situation; they may even be left in the court, driving them in the evening into the place appropriated to them for the night.



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